

GRADE  
• 8 •

August 2012



## Assessment Guide

- **ENGLISH LANGUAGE ARTS**
- **MATHEMATICS**
- **SCIENCE**
- **SOCIAL STUDIES**

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This public document was published at a total cost of \$6,000.00. This web-only document was published for the Louisiana Department of Education, Office of Standards, Assessments, and Accountability, Division of Assessments and Accountability, P.O. Box 94064, Baton Rouge, LA 70804-9064, by Data Recognition Corporation, 13490 Bass Lake Road, Maple Grove, MN 55311. This material was published in accordance with the standards for printing by state agencies established pursuant to R.S. 43:31 and in accordance with the provisions of Title 43 of the Louisiana Revised Statutes.

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This *Assessment Guide* may be distributed in its entirety to all teachers. However, schools may choose to provide the specific content chapters to teachers who are responsible for each content area.

**All teachers should be provided with the following sections of the *Assessment Guide*:**

- Preface
- Appendices A, B, C, and D, which include a glossary, frequently asked questions, information about testing special populations, a Writer's Checklist, and a Mathematics Reference Sheet.

## Preface

*Louisiana Believes* embraces the principle that all children can achieve at high levels, as evidenced in Louisiana's recent adoption of the Common Core State Standards (CCSS). *Louisiana Believes* also promotes the idea that Louisiana's educators should be empowered to make decisions to support the success of their students. In keeping with these values, the Department has created transitional assessment guides to help prepare teachers and students as they transition to the new CCSS over the next two years. These guides reflect the State's commitment to consistent and rigorous assessments and provide educators and families with clear information about expectations for student performance.

### What is the purpose of the *Assessment Guide*?

The *LEAP Assessment Guide* provides an overview of Louisiana assessments administered through the Louisiana Educational Assessment Program (LEAP). In addition to providing teachers with a description of the overall design of the LEAP tests, this guide presents sample test items and suggested informational resources.

Teachers should use this guide to:

- become familiar with the LEAP test format,
- include similar item formats in classroom instruction and assessments,
- align instruction and assessment with the Louisiana Comprehensive Curriculum and Grade-Level Expectations (GLEs), and
- provide appropriate test accommodations.

Questions regarding this *Assessment Guide* should be addressed to the Division of Assessments and Accountability, Louisiana Department of Education (LDOE), at 225-342-3393 or toll free at 1-877-453-2721.

### Why has the *Assessment Guide* been revised?

In 2010, the Board of Elementary and Secondary Education (BESE) approved the Common Core State Standards (CCSS) ([http://www.doe.state.la.us/topics/common\\_core.html](http://www.doe.state.la.us/topics/common_core.html)), which will eventually replace Louisiana's English language arts (ELA) and mathematics standards and GLEs. After adopting the CCSS, Louisiana became a governing member of a 24-state

consortium—the Partnership for Assessment of Readiness for College and Careers (PARCC)—working to develop next-generation assessments that measure the full range of the CCSS. In preparation for the PARCC assessments, which are to be administered starting in the 2014-2015 school year, the Department has created transitional assessments in ELA and mathematics. This revised guide provides information about the changes to LEAP during the transition to the CCSS.

**It is important to note that the LEAP Science and Social Studies tests have not changed. The content standards and benchmarks that form the basis for these tests have not changed. Rather, the format and the organization of the guides have been revised to reflect the ELA and mathematics transition to the CCSS, and the text has been edited for conciseness.**

## How will students and teachers transition to the CCSS and PARCC?

The state has developed an implementation plan to ease the transition to the more rigorous new standards and assessments. This plan, outlined below, includes two years of implementation of transitional curriculum and assessments. Full implementation of the CCSS and PARCC assessments will occur in the 2014–2015 school year. Table 1 provides an overview of the assessment plan for grades 3–8.

**Table 1: Assessment Implementation Plan**

2012–2013	2013–2014	2014–2015
Transitional	Transitional	PARCC

**2012–2013 and 2013–2014: Transition Years** – The transitional LEAP assessments will be administered during the spring of 2013 and the spring of 2014. These assessments are not designed to be more difficult than the current LEAP assessments, but teachers will need to shift their instruction for their students to be fully prepared.

The LEAP tests administered through the 2011–2012 school year measured the knowledge and skills contained in the state’s content standards and benchmarks that are clustered by grades K-4 in the grade 4 LEAP assessments and grades 5-8 in the grade 8 LEAP assessments. The LEAP ELA tests will continue to measure the skills presented in these clusters, but the writing prompts on the transitional assessments will be a new type of prompt that focuses on a key instructional shift—writing grounded in textual evidence. Instead of responding to a “stand alone” writing prompt, students will read one or two passages and use the information from the text(s) to support the response. The Reading and Responding, Using Information Resources, and Proofreading components will continue to be assessed in the same way.

The grade 8 LEAP mathematics transitional assessments will change to only include items that measure content common to the grade 8 GLEs and the CCSS ([www.louisianaschools.net/topics/gle.html](http://www.louisianaschools.net/topics/gle.html)).

**2014–2015: Full Implementation** – The new PARCC assessments for the LEAP grades will be administered starting in the spring of 2015. The CCSS will replace the GLEs in ELA and mathematics.

## What is the purpose of the LEAP?

Through the LEAP, students are able to demonstrate what they know about a content area, as well as their mastery of the standards, benchmarks, and GLEs, to help educators determine how students are progressing in relation to the content standards from year to year. The LEAP tests remain high stakes for students in grades 4 and 8 because they are tied to promotional policy. The high-stakes testing policy can be accessed at <http://www.doe.state.la.us/testing/>.

The LEAP assessments are part of the testing program that complies with the requirements of the No Child Left Behind Act (NCLB), the federal act that requires states to administer tests in reading and mathematics: yearly in grades 3 through 8 and once in grades 10 through 12, as well as in science: once in grades 3 through 5, once in grades 6 through 9, and once in grades 10 through 12. Some of the NCLB requirements are met through Louisiana's *i*LEAP tests in ELA, mathematics, and science at grades 3, 5, 6, and 7 and by End-of-Course (EOC) high school assessments.

NCLB requires that state assessments be aligned to state content standards. In addition, NCLB requires that states express student results in terms of the state's performance standards—Louisiana's achievement levels. The LEAP assessments, which are given at grades 4 and 8, have been developed to align to the Louisiana content standards, benchmarks, and GLEs.

## What Does the *Assessment Guide* Include?

The *Assessment Guide* provides information for teachers regarding the purpose and structure of the LEAP. Separate guides are available for both of the LEAP grade levels: 4 and 8. The guides include information about:

- test design (format and blueprints),
- test content,
- sample test items, and
- scoring.

## General LEAP Test Design

The LEAP includes multiple-choice and constructed-response items. Table 2 presents the overall design (test components) of the LEAP for each of the content areas assessed. It presents the approximate number of items for each test and the item types, indicated by multiple-choice (MC) and constructed-response (CR).

**Table 2: Overall Design of the LEAP**

CONTENT AREA	TEST SESSIONS
<b>English Language Arts (Grades 4 and 8)</b>	<ul style="list-style-type: none"> <li>Writing (in response to a text-based prompt)</li> <li>Reading and Responding <ul style="list-style-type: none"> <li>4 reading passages: 2 short/2 long</li> <li>4 to 6 MC items (1 point each) per passage</li> <li>2 CR (short-answer) items (2 points each) per passage</li> <li>Grade 8 only: one extended CR item (4 points)</li> </ul> </li> <li>Using Information Resources <ul style="list-style-type: none"> <li>One resource packet with 4 to 6 sources</li> <li>5 MC items and 2 CR (short-answer) items</li> </ul> </li> <li>Proofreading <ul style="list-style-type: none"> <li>One short passage</li> <li>8 MC items</li> </ul> </li> </ul>
<b>Mathematics (Grades 4 and 8)</b>	<ul style="list-style-type: none"> <li>60 MC items <ul style="list-style-type: none"> <li>Grade 4: <ul style="list-style-type: none"> <li>36 noncalculator</li> <li>24 calculator</li> <li>Problem-solving context</li> </ul> </li> <li>Grade 8: <ul style="list-style-type: none"> <li>30 noncalculator</li> <li>30 calculator</li> <li>Problem-solving context</li> </ul> </li> </ul> </li> <li>Extended CR items (4 points) <ul style="list-style-type: none"> <li>Grade 4: 3 items</li> <li>Grades 8: 4 items</li> </ul> </li> </ul>
<b>Science (Grades 4 and 8)</b>	<ul style="list-style-type: none"> <li>40 MC items (across 5 strands) <ul style="list-style-type: none"> <li>Science as Inquiry</li> <li>Physical Science</li> <li>Life Science</li> <li>Earth and Space Science</li> <li>Science and the Environment</li> </ul> </li> <li>4 CR (short-answer) items (2 points) <ul style="list-style-type: none"> <li>1 per <i>content</i> strand</li> </ul> </li> <li>Comprehensive Science Task <ul style="list-style-type: none"> <li>3 CR (short-answer) items (inquiry strand)</li> <li>1 extended CR item (4 points) related to <i>content</i> strand</li> </ul> </li> </ul>
<b>Social Studies (Grades 4 and 8)</b>	<ul style="list-style-type: none"> <li>MC Items (across 4 strands) <ul style="list-style-type: none"> <li>Geography</li> <li>Civics</li> <li>Economics</li> <li>History</li> </ul> </li> <li>Grade 4 <ul style="list-style-type: none"> <li>50 MC</li> </ul> </li> <li>Grade 8 <ul style="list-style-type: none"> <li>60 MC</li> </ul> </li> <li>Extended CR item (4 points) <ul style="list-style-type: none"> <li>4 items (1 per strand)</li> </ul> </li> </ul>

## Characteristics of Items

**Multiple-choice items** assess knowledge, conceptual understanding, and application of skills in each of the four content areas. The multiple-choice items consist of an interrogatory stem followed by four response options (A, B, C, D) and are scored correct or incorrect.

**Constructed-response items** occur in each of the four content areas. These items require students to compose an answer, and generally require higher-order thinking.

On the grade 8 ELA test, there are twelve constructed-response items. One requires a student to read one or two passages and then write a composition in response to a prompt that includes information from the text in the response. The composition is scored on a 12-point model based on Louisiana’s new writing rubric for the dimensions of Content, Style, Sentence Formation, Usage, Mechanics, and Spelling (dimensions 1–6). Ten constructed-response items require short answers, scored 0–2 points and one requires an essay response, which is scored 0–4 points.

On the Mathematics test, the constructed-response items may require students to demonstrate their grasp of a concept, their analysis of information, their evaluation of a principle, or their application of a skill. Students may also be asked to construct or interpret a chart or graph, map, timeline, or other graphic. The mathematics items are scored on a 0–4 point scale.

On the Science and Social Studies tests, the constructed-response items include those requiring short answers, scored 0–2 points, and extended constructed-response items requiring more in-depth answers, scored 0–4 points. The content-area sections of the guide present detailed information about the characteristics of the items.

## Administration Schedule

The LEAP tests are administered in March (Phase 1) and April (Phase 2). Tables showing the number of sessions and number of questions for each session are provided in the content-area sections of this guide.

The Phase 1 English Language Arts and Mathematics tests are administered in one day. The Phase 2 English Language Arts, Mathematics, Science, and Social Studies tests each are administered in one day. An overview of the content areas and testing times for LEAP are shown in the following tables. The suggested times are provided to assist in planning.

**Table 3: Phase 1 Components of the LEAP**

Tests	Testing Time
ELA: Writing	75 minutes (grade 4) 90 minutes (grade 8)
Mathematics: Constructed Response	60 minutes (grades 4 and 8)

**Table 4: Phase 2 Components of the LEAP**

Tests	Suggested Testing Time
ELA: Reading and Responding	60 minutes (grade 4) 90 minutes (grade 8)
ELA: Using Information Resources	40 minutes (grades 4 and 8)
ELA: Proofreading	20 minutes (grades 4 and 8)
Mathematics: Multiple Choice—No Calculator	80 minutes (grade 4) 75 minutes (grade 8)
Mathematics: Multiple Choice—Calculator	50 minutes (grade 4) 75 minutes (grade 8)
Science: Multiple Choice	60 minutes (grades 4 and 8)
Science: Short Answer Questions	30 minutes (grades 4 and 8)
Science: Task	60 minutes (grades 4 and 8)
Social Studies: Multiple Choice, Session 1	40 minutes (grade 4) 45 minutes (grade 8)
Social Studies: Multiple Choice, Session 2	40 minutes (grade 4) 45 minutes (grade 8)
Social Studies: Constructed Response	60 minutes (grade 4 and 8)

## Achievement Levels

Student performance on LEAP is reported in terms of achievement level: *Advanced, Mastery, Basic, Approaching Basic, or Unsatisfactory*.

Louisiana's general policy definitions for the five achievement levels are provided below.

**Advanced:** *A student at this level has demonstrated superior performance beyond the level of mastery.*

**Mastery:** *A student at this level has demonstrated competency over challenging subject matter and is well prepared for the next level of schooling.*

**Basic:** *A student at this level has demonstrated only the fundamental knowledge and skills needed for the next level of schooling.*

**Approaching Basic:** *A student at this level has only partially demonstrated the fundamental knowledge and skills needed for the next level of schooling.*

**Unsatisfactory:** *A student at this level has not demonstrated the fundamental knowledge and skills needed for the next level of schooling.*

## Test Accommodations

Accommodations are available to qualifying students who are classified as IDEA Special Education, Section 504, and Limited English Proficient (LEP). Test accommodations should not be different from or in addition to the accommodations provided in the classroom during instruction and as indicated on the student's Individualized Education Program (IEP), Section 504 Individual Accommodation Plan (IAP), or LEP accommodation plan. Testing and instructional accommodations must be based on each student's needs as documented in the student's IEP, IAP, or LEP accommodation plan.

For students with disabilities, test accommodations are provided to minimize the effects of a disability to ensure that a student can demonstrate the degree of achievement he or she actually possesses. An *accommodation* is a change in the setting of the test administration, the timing, scheduling, presentation format, and/or method of response to the assessment. Not all students with disabilities will need test accommodations, but many will need them to provide a valid and accurate measure of their abilities. The goal in using accommodations is to give students with disabilities an equal opportunity in assessment, not to give students with disabilities an unfair advantage over other students or to subvert or invalidate the purpose of the tests. The accommodation should allow the test score to reflect a student's proficiency in the area tested, without the interference of his or her disability.

Students classified as Limited English Proficient (LEP) may receive LEP accommodations if they are used regularly in the student's classroom instruction and assessment. LEP accommodations are provided for these students to aid them in accessing the content without subverting or invalidating the purpose of the tests.

Since accommodations used during state assessments must be an ongoing part of classroom instruction and assessment, it is crucial that general educators be knowledgeable about accommodations, use them routinely in the classroom, and be prepared to implement the use of approved accommodations during state assessments. For a list of approved test accommodations that may be used for students with disabilities or LEP students and suggestions for implementing accommodations during assessment, see Appendix C.

## What additional LEAP resources are available?

The Louisiana Department of Education has developed several resources to assist educators as they prepare students for LEAP. The following materials are available on the LDOE website, [www.louisianaschools.net](http://www.louisianaschools.net):

- Content Standards  
[http://www.doe.state.la.us/curriculum/content\\_standards.html](http://www.doe.state.la.us/curriculum/content_standards.html)
- Grade-Level Expectations (GLEs)  
(<http://www.doe.state.la.us/topics/gle.html>)
- Transitional Comprehensive Curriculum  
([http://www.doe.state.la.us/topics/comprehensive\\_curriculum.html](http://www.doe.state.la.us/topics/comprehensive_curriculum.html))
- Transitional Practice Tests for grades 3–8  
([http://www.doe.state.la.us/topics/trans\\_assessments.html](http://www.doe.state.la.us/topics/trans_assessments.html))
- Enhanced Assessment of the Grade-Level Expectations (EAGLE)  
(<https://www.louisianaeagle.org/pma/orca2/eagle.htm>)
- Released Writing Prompts for grades 4 and 8  
([http://www.doe.state.la.us/topics/trans\\_assessments.html](http://www.doe.state.la.us/topics/trans_assessments.html))
- Released Item Documents for grades 4, 8, 10, and 11  
([http://www.louisianaschools.net/topics/released\\_test\\_items.html](http://www.louisianaschools.net/topics/released_test_items.html))  
([http://www.louisianaschools.net/topics/released\\_test\\_items\\_10\\_11.html](http://www.louisianaschools.net/topics/released_test_items_10_11.html))
- Practice Assessment/Strengthen Skills (PASS)  
(<http://www.louisianapass.org/>)

# Chapter 1: LEAP English Language Arts, Grade 8

This section describes the overall design of the LEAP English Language Arts (ELA) test to be administered to students in grade 8. Test specifications, scoring rubrics, and sample test questions are provided to explain how the standards and benchmarks for English language arts are assessed.

## Test Structure and Item Types

The ELA test consists of four sessions, which are administered in two phases, each phase in a single day:

Phase 1:

- Writing

Phase 2:

- Reading and Responding
- Using Information Resources
- Proofreading

Students are allowed as much time as they need to complete each session, but suggested times are provided in the *Test Administration Manual*, which explains the procedures for allowing students additional time to complete a session of the test.

### Writing

To better prepare our students for the Common Core State Standards, the writing prompts on the transitional assessments will focus on a key instructional shift—writing grounded in textual evidence. Instead of responding to a "stand alone" writing prompt, students will be expected to read one or two passages and then write a composition that includes evidence from the text(s) in the response. This session of the test measures the content of Standards 2 and 3.

The Writing test is **untimed**, but students should be given a minimum of 90 minutes to read the passage(s), plan and write their composition, and check their work. Students are given a Writer's Checklist and are provided with dictionaries and thesauruses. A copy of the Writer's Checklist is located in Appendix D.

### Reading and Responding

This session consists of four reading passages (including at least one fiction, one nonfiction, and one poem). It includes a variety of multiple-choice and short-answer questions and one constructed-response question that measure the content of standards 1, 6, and 7. All reading passages are complete and authentic, either previously published work, fully developed

excerpts from longer published works, or well-developed text written for the test. Excerpts from longer works may be used if they are self-contained.

**Fiction passages** (approximately 500–1,000 words) may include short stories, folktales, legends, myths, or dramas.

**Nonfiction passages** (approximately 500–1,000 words) may include newspaper and magazine articles, autobiographies, biographies, editorials, encyclopedia articles, letters to the editor, and speeches. If appropriate, the nonfiction passage may include a visual (for example, pictures, graphs, tables, flow charts).

The lengths of two passages (one fiction and one nonfiction) fall within the respective ranges noted above. The poem and the fourth passage may be shorter than 500 words.

The reading level of each piece is grade-appropriate. Passages reflect a balance among length, readability level, and interest level. Long passages are measured with 6 multiple-choice and 2 short-answer questions. Short passages are measured with 4 multiple-choice and 2 short-answer questions.

The Reading and Responding session consists of 20 multiple-choice questions, 8 short-answer questions, and 1 extended-response question that are distributed across Standards 1, 6, and 7.

## **Using Information Resources**

This session assesses Standard 5. Students are provided four to six reference sources to use to answer a series of 5 multiple-choice and 2 short-answer questions. These reference sources may include sources such as:

- articles (from encyclopedias, magazines, newspapers, textbooks)
- parts of books (tables of contents, indexes, glossaries, bibliographies)
- visual aids (maps, graphs, tables, charts, illustrations, schedules, diagrams)
- computer information (such as a page from an online card catalog or magazine index, Internet visuals, keyword searches, pull-down menus)

All of the information resources are realistic, grade-appropriate materials that an eighth grader might find in a library and use in preparing a project or report. All materials are related to a specific topic. With the reference materials, students receive a written description of a task, such as gathering information and planning to write a report. Students are directed to skim through the resources to locate and select information.

## **Proofreading**

This session assesses Standard 3. Students read a text of about 100–250 words that includes mistakes in sentence formation, usage, mechanics, and spelling. The text may be a letter, a

narrative, an editorial, or an expository piece. It will include eight numbered, underlined parts. Students answer multiple-choice questions that require choosing the best way to write each underlined part (either by correcting the mistake or by indicating that the underlined part is written correctly as is).

Proofreading consists of 8 multiple-choice questions.

**Table 1.1: English Language Arts Test Specifications, Grade 8**

<b>Content Standard</b>	<b>Points</b>	<i><b>Subtest</b></i>			
		<b>Writing</b>	<b>Using Information Resources</b>	<b>Reading and Responding</b>	<b>Proofreading</b>
1. Read, comprehend, and respond	10	—	—	10	—
2. Write competently	8	8	—	—	—
3. Use conventions of language	12	4	—	—	8
4. Apply speaking/listening skills	N/A	—	—	—	—
5. Locate, select, and synthesize information	9	—	9	—	—
6. Read, analyze, and respond to literature	12	—	—	12	—
7. Apply reasoning and problem-solving skills	18	—	—	18	—
<b>Total</b>	<b>69</b>	<b>12</b>	<b>9</b>	<b>40</b>	<b>8</b>
<b>No. of items</b>	<b>45</b>	<b>1</b>	<b>7</b>	<b>29</b>	<b>8</b>

The ELA test design remains constant from year to year.

## Scoring the English Language Arts Sessions

### Multiple-Choice Items

Each multiple-choice question has four response options (A, B, C, and D) and is worth one point each. Correct answers receive a score of 1; incorrect answers receive a score of 0.

### Written Composition

In the Writing section of the assessment, there is a writing prompt that requires a student to read one or two passages and then write a composition that includes evidence from the text in the response. Student compositions are scored using two rubrics: one for Content and one for Style. There are two Content rubrics; one is used to score student compositions that respond to prompts with one passage; the other is for prompts with two passages. The Content and Style Rubrics can be found on pages 5 through 7.

The Content Rubric considers how well students present their central idea; the development of that idea, including the appropriate and accurate use of evidence from the passage(s); and the organization of their ideas. The Style Rubric considers word choice; sentence fluency, which includes sentence structure and sentence variety; and voice, the individual personality of the writing.

The written response to the writing prompt is also scored for the conventions of writing (Sentence Formation, Usage, Mechanics, and Spelling). All other written responses (short-answer and extended-response items) for the ELA, Mathematics, Science, and Social Studies assessments are scored for content only.

A 12-point rubric is used to score writing. The dimensions and point values of the writing rubric are:

Content	4 points (on a 1-to-4-point scale)
Style	4 points (on a 1-to-4-point scale)
Sentence Formation	1 point (on a 0-to-1-point scale)
Usage	1 point (on a 0-to-1-point scale)
Mechanics	1 point (on a 0-to-1-point scale)
Spelling	1 point (on a 0-to-1-point scale)

Legibility contributes to the scorers' ease of understanding what the student has written. Any legible composition will be scored, regardless of penmanship. Students may write in print or cursive. Compositions will be considered **on topic** if the scorer can determine that the student attempted to respond to the prompt.

## CONTENT (One Passage): Central Idea, Development, and Organization

**Key Questions:** Does the writer stay focused and respond to all parts of the task? Does the writer's use of the text show an understanding of the passage and the writing task? Does the organizational structure strengthen the writer's ideas and make the composition easier to understand?

Score Point	4 Consistent, though not necessarily perfect, control; many strengths present	3 Reasonable control; some strengths and some weaknesses	2 Inconsistent control; the weaknesses outweigh the strengths	1 Little or no control; minimal attempt
CENTRAL IDEA	<ul style="list-style-type: none"> <li>• sharply focused central idea</li> <li>• shows a complete understanding of the task</li> </ul>	<ul style="list-style-type: none"> <li>• clear central idea</li> <li>• shows a general understanding of the task</li> </ul>	<ul style="list-style-type: none"> <li>• vague central idea</li> <li>• shows a partial understanding of the task</li> </ul>	<ul style="list-style-type: none"> <li>• unclear or absent central idea</li> <li>• shows a lack of understanding of the task</li> </ul>
<b>A composition without evidence from the passage cannot receive a score higher than a 2 in Content.</b>				
USE OF THE PASSAGE AND DEVELOPMENT	<ul style="list-style-type: none"> <li>• includes ample, well-chosen evidence from the passage to support central idea</li> <li>• Evidence and ideas are developed thoroughly.</li> <li>• Details are specific, relevant, and accurate.</li> </ul>	<ul style="list-style-type: none"> <li>• includes sufficient and appropriate evidence from the passage to support central idea</li> <li>• Evidence and ideas are developed adequately (may be uneven).</li> <li>• Details are, for the most part, relevant and accurate.</li> </ul>	<ul style="list-style-type: none"> <li>• includes insufficient or no evidence from the passage, <b>OR</b> only summarizes or paraphrases passage information</li> <li>• Evidence and ideas are not developed adequately (list-like).</li> <li>• Some information may be irrelevant or inaccurate.</li> </ul>	<ul style="list-style-type: none"> <li>• includes minimal or no evidence from the passage and/or the evidence shows a misunderstanding of the passage</li> <li>• minimal/no development</li> <li>• Information is irrelevant, inaccurate, minimal, confusing.</li> </ul>
ORGANIZATION	<ul style="list-style-type: none"> <li>• Evidence of planning and logical order allows reader to easily move through the composition.</li> <li>• Clear beginning, middle, and ending contribute sense of wholeness.</li> <li>• effective transitions</li> </ul>	<ul style="list-style-type: none"> <li>• Logical order allows reader to move through the composition.</li> <li>• has a beginning and an ending</li> <li>• transitions</li> </ul>	<ul style="list-style-type: none"> <li>• attempt at organization</li> <li>• digressions, repetition</li> <li>• weak beginning and ending</li> <li>• may lack transitions</li> </ul>	<ul style="list-style-type: none"> <li>• random order</li> <li>• no beginning or ending</li> <li>• difficult for the reader to move through the response</li> </ul>

## CONTENT (Two Passages): Central Idea, Development, and Organization

**Key Questions:** Does the writer stay focused and respond to all parts of the task? Does the writer's use of the text show an understanding of the passages and the writing task? Does the organizational structure strengthen the writer's ideas and make the composition easier to understand?

Score Point	4 Consistent, though not necessarily perfect, control; many strengths present	3 Reasonable control; some strengths and some weaknesses	2 Inconsistent control; the weaknesses outweigh the strengths	1 Little or no control; minimal attempt	
CENTRAL IDEA	<ul style="list-style-type: none"> <li>• sharply focused central idea</li> <li>• shows a complete understanding of the task</li> </ul>	<ul style="list-style-type: none"> <li>• clear central idea</li> <li>• shows a general understanding of the task</li> </ul>	<ul style="list-style-type: none"> <li>• vague central idea</li> <li>• shows a partial understanding of the task</li> </ul>	<ul style="list-style-type: none"> <li>• unclear or absent central idea</li> <li>• shows a lack of understanding of the task</li> </ul>	
<b>USE OF THE PASSAGE(S) AND DEVELOPMENT</b>		<p><b>A composition that addresses only one of the two passages cannot receive a score higher than a 3 in Content. A score of 4 cannot be assigned unless both passages have been addressed.</b></p>			
USE OF THE PASSAGE(S) AND DEVELOPMENT	<ul style="list-style-type: none"> <li>• includes ample, well-chosen evidence from the passages to support central idea</li> <li>• Evidence and ideas are developed thoroughly.</li> <li>• Details are specific, relevant, and accurate.</li> </ul>	<ul style="list-style-type: none"> <li>• includes sufficient and appropriate evidence from at least one of the passages to support central idea</li> <li>• Evidence and ideas are developed adequately (may be uneven).</li> <li>• Details are, for the most part, relevant and accurate.</li> </ul>	<ul style="list-style-type: none"> <li>• includes insufficient or no evidence from the passage(s), <b>OR</b> only summarizes or paraphrases passage information</li> <li>• Evidence and ideas are not developed adequately (list-like).</li> <li>• Some information may be irrelevant or inaccurate.</li> </ul>	<ul style="list-style-type: none"> <li>• includes minimal or no evidence from the passage(s) and/or the evidence shows a misunderstanding of the passage</li> <li>• minimal/no development</li> <li>• Information is irrelevant, inaccurate, minimal, confusing.</li> </ul>	
ORGANIZATION	<ul style="list-style-type: none"> <li>• Evidence of planning and logical order allows reader to easily move through the composition.</li> <li>• Clear beginning, middle, and ending contribute sense of wholeness.</li> <li>• effective transitions</li> </ul>	<ul style="list-style-type: none"> <li>• Logical order allows reader to move through the composition.</li> <li>• has a beginning and an ending</li> <li>• transitions</li> </ul>	<ul style="list-style-type: none"> <li>• attempt at organization</li> <li>• digressions, repetition</li> <li>• weak beginning and ending</li> <li>• may lack transitions</li> </ul>	<ul style="list-style-type: none"> <li>• random order</li> <li>• no beginning or ending</li> <li>• difficult for the reader to move through the response</li> </ul>	

## STYLE: Word Choice, Sentence Fluency, and Voice

**Key Questions:** Would you keep reading this composition if it were longer? Do the words, phrases, and sentences strengthen the content and allow the reader to move through the writing with ease?

Score Point	4 Consistent, though not necessarily perfect, control; many strengths present	3 Reasonable control; some strengths and some weaknesses	2 Inconsistent control; the weaknesses outweigh the strengths	1 Little or no control; minimal attempt
<b>WORD CHOICE</b>	<ul style="list-style-type: none"> <li>• precise</li> <li>• effective</li> <li>• vivid words and phrases appropriate to the task</li> </ul>	<ul style="list-style-type: none"> <li>• clear but less specific</li> <li>• includes some interesting words and phrases appropriate to the task</li> </ul>	<ul style="list-style-type: none"> <li>• generic</li> <li>• limited</li> <li>• repetitive</li> <li>• overused</li> </ul>	<ul style="list-style-type: none"> <li>• functional</li> <li>• simple (below grade level)</li> <li>• may be inappropriate to the task</li> </ul>
<b>SENTENCE FLUENCY</b>	<ul style="list-style-type: none"> <li>• fluid, very easy to follow, because of variety in length, structure, and beginnings</li> </ul>	<ul style="list-style-type: none"> <li>• generally varied in length and structure</li> <li>• Most sentences have varied beginnings.</li> </ul>	<ul style="list-style-type: none"> <li>• little or no variety in length and structure</li> <li>• Awkward sentences may affect the fluidity of the reading.</li> <li>• same beginnings</li> </ul>	<ul style="list-style-type: none"> <li>• simple sentences</li> <li>• no variety</li> <li>• Construction makes the response difficult to read.</li> </ul>
<b>VOICE (individual personality of the writing)</b>	<ul style="list-style-type: none"> <li>• compelling and engaging</li> </ul>	<ul style="list-style-type: none"> <li>• clear, but may not be particularly compelling</li> </ul>	<ul style="list-style-type: none"> <li>• weak and/or inconsistent voice</li> </ul>	<ul style="list-style-type: none"> <li>• no voice</li> <li>• Response is too brief to provide an adequate example of style; minimal attempt.</li> </ul>

The dimensions of Sentence Formation, Usage, Mechanics, and Spelling are scored with either a **+** (acceptable), which receives 1 point, or **-** (unacceptable), which receives 0 points.

**Sentence Formation:** Desirable features are completeness and construction of a variety of patterns.

<b>+</b>	The response exhibits <b>acceptable</b> control of sentence formation. Most sentences are correct; there are few, if any, run-on sentences or fragments. Additionally, there is a variety of sentence patterns, indicating that the writer can construct more than one type of sentence competently.
<b>-</b>	The response exhibits <b>unacceptable</b> control of sentence formation. There are run-on sentences, fragments, and/or poorly constructed sentences that indicate that the writer does not have adequate skill in sentence formation. There may be evidence of control of only one type of sentence pattern (usually simple).

**Usage:** Features are agreement, standard inflections, and word meaning.

<b>+</b>	The response exhibits <b>acceptable</b> control of usage. Subject-verb agreement, verb tenses, forms of adjectives and adverbs, and word meaning are generally correct. If errors are present, they do not appear to be part of a pattern of usage errors.
<b>-</b>	The response exhibits <b>unacceptable</b> control of usage. There are errors in subject-verb agreement, verb tenses, forms of adjectives and adverbs, and/or word meaning. The pattern of errors is evidence of a lack of control of the features of usage.

**Mechanics:** Features are punctuation and capitalization.

<b>+</b>	The response exhibits <b>acceptable</b> control of mechanics. Punctuation and capitalization are generally correct. If errors are present, they do not appear to be part of a pattern of mechanics errors.
<b>-</b>	The response exhibits <b>unacceptable</b> control of mechanics. There are errors in punctuation and capitalization. The pattern of errors is evidence of a lack of control of the features of mechanics.

**Spelling:**

<b>+</b>	The response exhibits <b>acceptable</b> control of spelling. The majority of grade-appropriate words are spelled correctly. There is no pattern of spelling errors.
<b>-</b>	The response exhibits <b>unacceptable</b> control of spelling. There is a pattern of spelling errors. There are errors in spelling grade-appropriate words.

In some cases, a composition may not be scorable. For example, if it is illegible or if it includes only copied text from the given passage(s), it will not be scored in any dimension and will receive a score of zero. A paper may be off-topic and cannot be scored for Content or Style, but it may be scored for Sentence Formation, Usage, Mechanics, and Spelling. Such a paper could receive a maximum of 4 of 12 points.

## Additional Scoring Criteria for Writing

To avoid double jeopardy during scoring, **one word** will constitute **only one error**. In situations in which it is difficult to determine to which dimension the error should be assigned, the scorer will take into account priority, context clues, and error patterns that are evident in the paper.

- Priority is given to the more serious grammatical errors.
- Context clues may indicate the writer's intention.
- Error patterns already evident in the paper indicate a skill weakness in that dimension.

### Sentence Formation:

- If a sentence with omissions, extra words, or wrong words can be corrected by changing **one word**, the error should count as a **usage** error.  
*Example:* When it's no school, I play all day.
- If a sentence requires the rearrangement, omission, or addition of **more than one word**, the error should count as a **sentence formation** error.  
*Example:* I saw those boys fighting while driving my car.
- Nonparallel structure, often in a series, is a **sentence formation** error.  
*Example:* We will live better lives, coping with our sorrows, and how to be joyful of our happiness.
- In grades that are not responsible for mastery of colons, a sentence that contains a series that should have been preceded by a colon would count as a **sentence formation** error. The alternate correct construction would be another sentence.  
*Example:* Janet is a good librarian because of all three of these reasons she is helpful, she is smart and she is courteous.
- If a sentence fragment is deliberately presented for effect, the error is **not counted** as an error.  
*Example:* What a break!
- A **pattern of awkward syntax** (word order) should be considered a **sentence formation** error.

### Quotations:

- All **spelling** and **grammar** errors that appear in a direct quotation are assumed to be the errors of the speaker, not the writer. They are **not counted in any dimension**. Errors in **mechanics** that appear in a direct quotation **do count**.  
*Example:* “You aint got no reason ta be here Manny!” shouted the foreman.
- Direct quotations **should not** be preceded by **that**. Indirect quotations **should** be preceded by **that**. These count as errors in **mechanics**.  
*Example:* Then Mom said that, “We cannot go along.” After we returned, she said we are in trouble.

## Mechanics, Usage, and Spelling:

Usage and mechanics errors count *each time* they occur in a composition. However, spelling errors count only **once**, even if a word is misspelled in more than one way.

- If a sentence begins with a capital letter but is **not** preceded by a period, the error counts as a **mechanics** error.

*Example:* Martha went to the well and looked inside Far below, something was sparkling in the water.

- If a sentence begins with a lowercase letter but is preceded by a period, the error counts as a **mechanics** error.

*Example:* Teddy is the youngest in the family. he is my only nephew.

- Use of double comparatives or double negatives is a common **usage** error.

*Example:* I'm even more better at soccer than at football. None of them are not my friend.

- Use of the wrong preposition is a common **usage** error.

*Example:* He went for the house.

- In addition to **TV**, both **T.V.** and **tv** are **acceptable** and **not mechanics** errors.

Interchanging **will** with **would** and **can** with **could** is **acceptable** and **not a usage** error. Use of **so they** instead of **so that they** is **acceptable** and **not a usage** error.

- Agreement errors of compound pronouns or collective nouns with possessives are **usage** errors.

*Examples: Correct:* *people's lives, everyone's hope, everybody's house, their lives*

- Agreement errors with collectives, phrases, and conjunctions are **usage** errors.

*Example: Incorrect:* None of the teachers are good role models or a hero.

- A word may be both a **usage** and a **spelling** error, or it may not be possible from **context clues** to determine whether the error is in spelling or in usage. In such instances, the error should be counted in **usage only**.

*Example:* She allway comes to work on time.

- If a misused word in a sentence is a real word, it is a **usage** error. If it is not a real word, it is a **spelling** error.

*Example:* We all went to the skating ring. (**usage**) We joined my parnets and were reddy to leave. (**spelling**)

- An error in which a **homonym** takes the place of the correct word is counted as a **spelling** error.

*Example:* Martin gave him a peace of his chocolate bar.

- Some words, although they are not real homonyms, are so phonetically similar that they are frequently misspelled. Context clues should indicate whether the skill weakness is **spelling** or **usage** (wrong word).

*Example:* I would rather have a vacation then a raise! (**spelling**) She was late for her piano listens. (**usage**)

- A word may be either a **spelling** or a **mechanics** error. Use either **context clues** or **error patterns** to determine which dimension would be most appropriate.  
*Example:* All the hero's aren't in the movies. (**spelling**)
- A word may be either a **usage** or a **mechanics** error. Use either **context clues** or **error patterns** to determine which dimension would be most appropriate.  
*Example:* Were going to Disneyland on our vacation. (**mechanics**)
- In a series, a comma before *and* is optional; both ways are considered **correct**.  
*Example:* The birds, cats and dogs . . . The birds, cats, and dogs . . .
- In some series, the placement of the comma **is not optional because it affects the sense** of the sentence.  
*Example:* The pet shop was filled with birds, cats and dogs (kennelled), and fish of every color, shape and size.
- A word at the end of a line that is not broken at the end of a syllable or is broken and has only one syllable is a **mechanics** error.  
*Example:* I worked at the National Fou-  
ndation for the Blind.

### Other Issues:

- **Jargon** that is in common use in contemporary speech is permitted in on-demand compositions.  
*Example:* After he cut the lights, we locked the door and left the house.
- **Dialect** is counted as a usage error unless it is in a direct quotation.  
*Example:* I'm very happy y'all are reading my test and I hope y'all pass me.

Students must produce a **composition** that addresses the writing prompt to fulfill the requirements of the writing session. Plays, poems, lyrics, and drawings are **not** acceptable.

Because the purpose of writing assessments is to determine how well students can demonstrate and maintain writing skills in an original on-demand composition, the rules of **standard written English** apply and override foreign language, regional, ethnic, and colloquial speech patterns.

For each administration of LEAP, a student's writing response is scored by at least two readers, whose scores are averaged for each dimension.

**Table 1.2: Example of Scores for the Written Composition**

Dimension	Reader 1	Reader 2	Average
Composing	3	4	3.5
Style/Audience Awareness	2	2	2.0
<i>Subtotal</i>			5.5
Sentence Formation	1	0	0.5
Usage	1	1	1.0
Mechanics	0	1	0.5
Spelling	1	1	1.0
<i>Subtotal</i>			3.0
<b>Total score</b>			<b>8.5 (of 12)</b>

### Short-Answer Items

The short-answer items in the grade 8 ELA test are scored on a 0- to 2-point scale. The following is a general scoring rubric for 2-point items. All responses to short answer items are hand scored with item-specific scoring rubrics, which are included with the sample items in this guide.

**Table 1.3: General Scoring Rubric—Short-Answer Items**

Score Level	Description of Score Level
2	<ul style="list-style-type: none"><li>The student's response provides a complete and correct answer.</li></ul>
1	<ul style="list-style-type: none"><li>The student's response is partially correct.</li><li>The student's response demonstrates limited awareness or contains errors.</li></ul>
0	<ul style="list-style-type: none"><li>The student's response is totally incorrect, irrelevant, too minimal to evaluate, or blank.</li></ul>

At grade 8, students write an extended response to a question that requires them to compare and/or contrast elements of two reading passages. The general scoring rubric for this item is shown here; an item-specific rubric is provided in the sample items in this guide.

**Table 1.4: General Scoring Rubric—Extended-Response Item**

Score Level	Description of Score Level
4	<ul style="list-style-type: none"><li>• The student’s response demonstrates in-depth understanding of the relevant content and/or procedures.</li><li>• The student completes all important components of the task accurately and communicates ideas effectively.</li><li>• Where appropriate, the student offers insightful interpretations and/or extensions.</li><li>• Where appropriate, the student uses more sophisticated reasoning and/or efficient procedures.</li></ul>
3	<ul style="list-style-type: none"><li>• The student completes most important aspects of the task accurately and communicates clearly.</li><li>• The response demonstrates an understanding of major concepts and/or processes, although less important ideas or details may be overlooked or misunderstood.</li><li>• The student’s logic and reasoning may contain minor flaws.</li></ul>
2	<ul style="list-style-type: none"><li>• The student completes some parts of the task successfully.</li><li>• The response demonstrates gaps in the conceptual understanding.</li></ul>
1	<ul style="list-style-type: none"><li>• The student completes only a small portion of the tasks and/or shows minimal understanding of the concepts and/or processes.</li></ul>
0	<ul style="list-style-type: none"><li>• The student’s response is totally incorrect, irrelevant, too minimal to evaluate, or blank.</li></ul>

## Standards and Benchmarks Assessed

This section explains which benchmarks are assessed and how they will be assessed. The information is organized by test sessions and, when appropriate, includes the following for each session: standards assessed; benchmarks assessed, or the text of all benchmarks eligible for LEAP; and any assessment limits, which include benchmarks that are excluded from LEAP and any special restrictions on test content.

### Explanation of Codes

Standards 1, 6, and 7 relate to reading comprehension skills.

Standards 2 and 3 relate to writing processes and conventions of language.

Standard 4 relates to speaking and listening skills, which are **not** assessed on LEAP.

Standard 5 relates to research skills.

English language arts codes are arranged by content area, standard number, grade cluster (E, M, H), and benchmark number. The first part of the code is always English language arts. The second part indicates the standard number. The third part indicates the grade cluster and benchmark number.

**Table 1.5: Examples of English Language Arts Codes**

Code	Translation
ELA-1-E4	English Language Arts, standard 1, Elementary, benchmark 4
ELA-4-M1	English Language Arts, standard 4, Middle School, benchmark 1
ELA-3-H3	English Language Arts, standard 3, High School, benchmark 3

## Writing

The Writing session measures standards 2 and 3.

**Standard 2: Students write competently for a variety of purposes and audiences.**

### Benchmarks Assessed

ELA-2-M1	writing multiparagraph compositions (150–200 words) that clearly imply a central idea with supporting details in a logical, sequential order
ELA-2-M2	using language, concepts, and ideas that show an awareness of the intended audience and/or purpose (for example, classroom, real-life, workplace) in developing complex compositions
ELA-2-M3	identifying and applying the steps of the writing process
ELA-2-M4	using narration, description, exposition, and persuasion to develop various modes of writing (for example, notes, compositions)*
ELA-2-M6	writing as a response to texts and life experiences (for example, personal and business)*

\*Inclusive of K–4 examples

For the Writing session, students compose a response to a writing topic, referred to as a writing prompt. ELA-2-M1, ELA-2-M2, ELA-2-M3, ELA-2-M4, and ELA-2-M6 are assessed through the written composition.

**Standard 3: Students communicate using standard English grammar, usage, sentence structure, punctuation, capitalization, spelling, and handwriting.**

### Benchmarks Assessed

ELA-3-M2	demonstrating use of punctuation (for example, colon, semicolon, quotation marks, dashes, parentheses)*, capitalization, and abbreviations
ELA-3-M3	demonstrating standard English structure and usage by using correct and varied sentence types (for example, compound and compound-complex) and effective personal styles
ELA-3-M4	demonstrating understanding of the parts of speech to make choices for writing
ELA-3-M5	spelling accurately using strategies and resources (for example, glossary, dictionary, thesaurus, spell check) when necessary

\*Inclusive of K–4 examples

Compositions are scored for the conventions of standard English. The content parameters for conventions grade 8 students are expected to know are below.

## **Content Parameters**

### *Punctuation*

- use of end punctuation
- use of commas to separate terms in a series, to separate independent clauses in a compound sentence, to set off direct quotations, between day and year in a date, between city and state, to set off nouns of direct address, after an introductory word or phrase, after the salutation, and after the closing in a friendly letter
- use of apostrophes with contractions and possessives
- use of semicolon in a sentence to separate independent clauses
- use of quotation marks in a direct quotation
- use of periods with abbreviations

### *Capitalization*

- capitalizing names and initials of persons, names of places, dates, months, and holidays, titles of respect, proper adjectives, geographical names, streets, cities, states, countries, names of companies, buildings, monuments, titles of books, songs, poems, etc.
- capitalizing the first word of a sentence, first word of a direct quotation, the pronoun *I*, the salutation and closing of a friendly letter

### *Sentence Structure*

- use of complete sentences (avoiding fragments and run-on sentences)

### *Usage*

- subject-verb agreement
- use of verb tenses
- adjectives and adverbs (for example, comparative and superlative; *real/really* or *good/well* except with the word *feel*)
- pronoun-antecedent agreement
- use of pronoun case
- avoiding double negatives
- usage of all parts of speech

### *Spelling*

- correct spelling of commonly used, grade-appropriate words

## Reading and Responding

The Reading and Responding session assesses reading comprehension skills specified in standards 1, 6, and 7 with four reading passages.

**Standard 1: Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.**

### Benchmarks Assessed

ELA-1-M1	using knowledge of word meaning and developing basic and technical vocabulary using various strategies (for example, context clues, idioms, affixes, etymology, multiple-meaning words)
ELA-1-M2	interpreting story elements (for example, mood, tone, style)* and literary devices (for example, flashback, metaphor, foreshadowing, symbolism)* within a selection
ELA-1-M4	interpreting (for example, paraphrasing, comparing, contrasting) texts with supportive explanations to generate connections to real-life situations and other texts (for example, business, technical, scientific)

\*Inclusive of K–4 examples

For benchmark ELA-1-M1, items relate to the reading passages and do not test vocabulary in isolation. ELA-1-M1 is tested through multiple-choice questions involving application of grade-appropriate vocabulary (including multiple-meaning and technical words). For items that assess understanding the meaning of a word from context, clues to proper meaning are found in the sentence itself or in surrounding sentences.

Questions measuring ELA-1-M2 and ELA-1-M4 may be short answer or multiple choice. For ELA-1-M2, types of figurative language may include simile, personification, idioms, and imagery as well as flashback, metaphor, foreshadowing, and symbolism.

ELA-1-M4 may be measured through questions about fiction, nonfiction, visuals included with the text, and/or other types of stimulus material (such as a graphic of a Web page).

These three benchmarks may be assessed with multiple-choice and short-answer items related to the reading passages.

**Standard 6: Students read, analyze, and respond to literature as a record of life experiences.**

**Benchmarks Assessed**

ELA-6-M2 identifying, comparing, and responding to a variety of classic and contemporary fiction and nonfiction literature from many genres (for example, novels, drama)\*

ELA-6-M3 classifying and interpreting various genres according to their unique characteristics

\*Inclusive of K–4 examples

To allow for assessment of these benchmarks, the four reading passages represent a variety of literary genres. Items involve identifying and interpreting characteristics of the passages according to type and include questions that require comparing and contrasting. The benchmarks may be measured by multiple-choice and short-answer questions related to the passages. The extended-response question measures ELA-6-M2.

**Standard 7: Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.**

**Benchmarks Assessed**

ELA-7-M1 using comprehension strategies (for example, summarizing, recognizing literary devices, paraphrasing)\* to analyze oral, written, and visual texts

ELA-7-M2 using reasoning skills (for example, categorizing, prioritizing), life experiences, accumulated knowledge, and relevant available information resources to solve problems in oral, written, and visual texts

ELA-7-M3 interpreting the effects of an author's purpose (reason for writing) and viewpoint (perspective)

ELA-7-M4 using inductive and deductive reasoning skills across oral, written, and visual texts\*

\*Inclusive of K–4 examples

Items measuring standard 7 focus primarily on assessment of reading comprehension and higher-order thinking skills. All four benchmarks may be measured by multiple-choice or short-answer questions. Items measuring ELA-7-M2 may involve steps in problem solving

but do not require resolution. Items measuring benchmark ELA-7-M3 may require identifying and interpreting the effects of an author’s purpose or viewpoint (perspective).

**Assessment Limits:** Any items involving recognizing literary devices are tested in connection with ELA-1-M2, which requires students to interpret literary devices, rather than under ELA-7-M1.

## Using Information Resources

The Using Information Resources session measures standard 5, research skills, by using a set of reference sources.

**Standard 5: Students locate, select, and synthesize information from a variety of texts, media, references, and technological sources to acquire and communicate knowledge.**

### Benchmarks Assessed

ELA-5-M1	identifying and using organizational features of printed text, other media, and electronic information (for example, microprint, CD-ROM, e-mail)*
ELA-5-M2	integrating information sources*
ELA-5-M3	locating, gathering, and selecting information using formal outlining, paraphrasing, interviewing, and surveying to produce documented texts and graphics*
ELA-5-M5	citing references using various formats (for example, endnotes, bibliography)*
ELA-5-M6	identifying and interpreting graphic organizers (for example, flowcharts, timelines, tree diagrams)*

\*Inclusive of K–4 examples

Items that measure ELA-5-M1 assess the ability to use organizational features of a variety of sources to locate information. Items measuring ELA-5-M2 assess the ability to evaluate the best source of information. Items that measure ELA-5-M3 focus on the skills of filling in parts of a graphic organizer and of outlining. ELA-5-M5 is assessed with items that involve identifying or reproducing accurate bibliographic entries. Items that measure ELA-5-M6 involve locating and interpreting information in graphic organizers.

These benchmarks may be assessed with multiple-choice and short-answer items.

## Proofreading

The Proofreading session measures standard 3, proofreading skills, with the use of a rough draft of a student letter, report, or essay.

**Standard 3: Students communicate using standard English grammar, usage, sentence structure, punctuation, capitalization, spelling, and handwriting.**

### Benchmarks Assessed

ELA-3-M2	demonstrating use of punctuation (for example, colon, semicolon, quotation marks, dashes, parentheses)*, capitalization, and abbreviations
ELA-3-M3	demonstrating standard English structure and usage by using correct and varied sentence types (for example, compound and compound-complex) and effective personal styles
ELA-3-M4	demonstrating understanding of the parts of speech to make choices for writing
ELA-3-M5	spelling accurately using strategies and resources (for example, glossary, dictionary, thesaurus, spell check) when necessary

\*Inclusive of K–4 examples

All items in the Proofreading session measure the use of the conventions of standard English. ELA-3-M5 is assessed with items that require students to recognize the correct spelling of grade-appropriate words. Students may not use dictionaries for this test session. The content parameters for eighth grade are shown on page 1-16.

These benchmarks are measured with 8 multiple-choice questions.

## Sample Test Items: Grade 8 English Language Arts

### Writing

Below is a sample passage-based writing prompt like those used in a grade 8 LEAP Transitional English Language Arts test.

**Read the passage about electronic communication. As you read the passage, think about the advantages and disadvantages of electronic communication. Then use the passage to help you write a well-organized multiparagraph composition.**

#### Electronic Communication

A recent study confirmed what most Americans had already suspected: teenagers send and receive numerous text messages every day. The average number was 60 messages sent daily. If you include all the replies, an average teen is sending and receiving over 3,000 text messages per month. How does all this texting affect personal relationships?

To answer this question, one must consider both the positive and negative aspects of electronic messages. Though 3,000 text messages sounds excessive, electronic messages actually have many benefits. Electronic messages, such as text messages, emails, or social network posts, are convenient. Messages can be sent and received instantly. Need to know which chapter you must read for the history test? Send a quick text message and find out in seconds!

Electronic messages also allow people to share and discuss ideas with different groups of people no matter how far they live from one another. Teens near and far can all access the same information and can be part of the same conversation. People who are separated by various circumstances in their lives are still able to communicate with each other. Electronic communication allows people to instantly send an email or text message rather than arranging a certain time to call someone who lives in another state or country. Traveling or moving away from friends does not have to mean losing contact with them.

One advantage of electronic messages is that because they are written, they can be edited before being sent or posted. Yet, many authors of electronic messages do not always do this. Thus, an advantage to electronic messages can become a disadvantage if sent too quickly and without review. Sometimes this results in a silly typo. At other times, however, messages become confusing, and create misunderstandings. Another disadvantage to the written message is that it is permanent and reproducible. One person's confidential message may be forwarded to innumerable, unintended recipients.

With the increase in electronic messaging, verbal and interpersonal skills may be suffering. Many people are having fewer face-to-face conversations because they are using electronic communication instead. Being competent in skills such as listening, making eye-contact, speaking clearly, and interpreting visual clues of your audience is important. Without practice, these skills can be lost. Is electronic communication really worth it then?

## Writing Topic

**Write a multiparagraph composition for your teacher that states your opinion about whether electronic communication helps or hurts people's ability to communicate. Clearly present your position and use details from the passage to help you support your opinion.**

**As you write, follow the suggestions below.**

- Be sure your composition has a beginning, a middle, and an ending.
- Use details from the passage and include enough information so your teacher will understand your response.
- Be sure to write clearly and to check your composition for correct spelling, punctuation, and grammar.

### **Description:**

*This prompt measures a student's ability to write an expository composition. Other prompts may ask students to write a story, describe something, or convince someone of their position.*

## **Reading and Responding**

Following are reading passages and items that have been used in the Reading and Responding session on grade 8 LEAP assessments. The samples are from the four types of passages that appear on tests: long and short fiction and nonfiction passages and poetry. Test items in the Reading and Responding session measure the following standards:

- **ELA Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.
- **ELA Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.
- **ELA Standard 7:** Students apply reasoning and problem-solving skills to their reading, writing, speaking, listening, viewing, and visually representing.

## Poetry

### The Ants at the Olympics

*by Richard Digance*

At last year's Jungle Olympics,  
The Ants were completely outclassed.  
In fact, from an entry of sixty-two teams,  
The Ants came their usual last.

They didn't win one single medal.  
Not that that's a surprise.  
The reason was not lack of trying,  
But more their unfortunate size.

While the cheetahs won most of the sprinting  
And the hippos won putting the shot,  
The Ants tried sprinting but couldn't,  
And tried to put but could not.

It was sad for the Ants 'cause they're sloggers.  
They turn out for every event.  
With their shorts and their bright orange tee-shirts,  
Their athletes are proud they are sent.

They came last at the high jump and hurdles,  
Which they say they'd have won, but they fell.  
They came last in the four hundred meters  
And last in the swimming as well.

They came last in the long-distance running,  
Though they say they might have come first.  
And they might if the other sixty-one teams  
Hadn't put in a finishing burst.

But each year they turn up regardless.  
They're popular in the parade.  
The other teams whistle and cheer them,  
Aware of the journey they've made.

For the Jungle Olympics in August,  
They have to set off New Year's Day.  
They didn't arrive the year before last.  
They set off but went the wrong way.

So long as they try there's a reason.  
After all, it's only a sport.  
They'll be back next year to bring up the rear,  
And that's an encouraging thought.

### Sample Multiple-Choice Items

1. What does the author of this poem suggest about the ants?

- A. They are poor athletes and should not compete.
- B. They lack respect for the rules of the game.
- C. They lack team spirit and do not try hard.
- D. They are persistent and do not give up.

**Correct response: D**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M3:** interpreting the effects of an author's purpose (reason for writing) and viewpoint (perspective)

2. In the fourth stanza, when the author refers to the ants as "sloggers," he means that they

- A. bicker when they lose.
- B. are lazy and unpopular.
- C. show up at all the games
- D. walk in the dirt and the mud.

**Correct response: C**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M4:** using inductive and deductive reasoning skills across oral, written, and visual texts

3. What literary technique does the author use throughout this poem?

- A. vivid imagery to suggest moods
- B. use of words that imitate sounds
- C. assigning human characteristics to nature
- D. foreshadowing of future successful events

**Correct response: C**

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-M2:** interpreting story elements (for example, mood, tone, style) and literary devices (for example, flashback, metaphor, foreshadowing, symbolism) within a selection

4. Which of the following lines from the poem represents a statement of fact rather than an opinion?

- A. “They’re popular in the parade.”
- B. “They didn’t win one single medal.”
- C. “So long as they try there’s a reason.”
- D. “The Ants were completely outclassed.”

**Correct response: B**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M4:** using inductive and deductive reasoning skills across oral, written, and visual texts

## Sample Short-Answer Items

5. Identify at least **two** qualities that the ants bring to the Jungle Olympics. Use an example from the poem to describe **each** of these qualities.

### Scoring Rubric:

Score	Description
2	The student's response is complete. It <ul style="list-style-type: none"><li>• identifies two qualities the ants bring to the Olympics</li><li>AND</li><li>• uses an example from the poem to describe each.</li></ul>
1	The student's response is partial. It <ul style="list-style-type: none"><li>• identifies one quality the ants bring to the Olympics</li><li>OR</li><li>• provides only one detail related to the ants' qualities</li><li>OR</li><li>• demonstrates a limited awareness and/or may contain errors.</li></ul>
0	The student's response is incorrect, irrelevant, too brief to evaluate, or blank.

### Exemplary responses:

#### *Qualities:*

- persistent and positive
- optimistic
- good sports
- hard workers
- other plausible text-based responses

#### *Supporting details:*

- They come every year.
- They try out for every event even when their size means they will lose.
- They tried out for the shot put, the hurdles, etc.
- Even though they got lost one year, they came the next.
- They are proud of themselves in their uniforms.
- They have to try really hard just to get to the Olympics on time.
- Other plausible text-based responses.

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-M4:** interpreting (for example, paraphrasing, comparing, contrasting) texts with supportive explanations to generate connections to real-life situations and other texts (for example, business, technical, scientific)

6. Describe the relationship between the ants and the other animals. Use at least **two** details from the poem to support your answer.

**Scoring Rubric:**

Score	Description
2	<p>The student's response is complete. It</p> <ul style="list-style-type: none"> <li>describes the relationship between the ants and the other animals</li> <li><b>AND</b></li> <li>provides two relevant details from the poem in support.</li> </ul>
1	<p>The student's response is partial. It</p> <ul style="list-style-type: none"> <li>describes the relationship between the ants and the other animals</li> <li><b>OR</b></li> <li>provides only one detail as support</li> <li><b>OR</b></li> <li>demonstrates a limited awareness and/or may contain errors.</li> </ul>
0	The student's response is incorrect, irrelevant, too brief to evaluate, or blank.

**Exemplary responses:**

Relationship	Detail
The ants are a source of inspiration for the other animals.	<p>The ants try out for everything even though they lose.</p> <p>The ants return year after year.</p>
The ants are popular with the other animals.	<p>“They are popular in the parade.”</p> <p>“The other teams whistle and cheer them.”</p>
The other animals like the way the ants keep trying year after year.	<p>The last line states, “that’s an encouraging thought.”</p>
Other plausible text-based responses.	

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-M2:** interpreting story elements (for example, mood, tone, style) and literary devices (for example, flashback, metaphor, foreshadowing, symbolism) within a selection

## To Sir, With Love

by E. R. Braithwaite

Next morning I had an idea. It was nothing clear cut, merely speculative, but I considered it all the way to school. Then, after assembly, as soon as they were quiet I waded in. This might be a bit rough, I thought, but here goes.

"I am your teacher, and I think it right and proper that I should let you know something of my plans for this class." I tried to pitch my voice into its most informally pleasant register. "We're going to talk, you and I, but we'll be reasonable with each other. I would like you to listen to me without interrupting in any way, and when I'm through any one of you may say your piece without interruption from me." I was making it up as I went along and watching them; at the least sign that it wouldn't work I'd drop it, fast.

They were interested, in spite of themselves; even the husky blasé Denham was leaning forward on his desk watching me.

"My business here is to teach you, and I shall do my best to make my teaching as interesting as possible. If at any time I say anything which you do not understand or with which you do not agree, I would be pleased if you would let me know. Most of you will be leaving school within six months or so; that means that in a short while you will be

embarked on the very adult business of earning a living. Bearing that in mind, I have decided that from now on you will be treated, not as children, but as young men and women, by me and by each other. When we move out of the state of childhood certain higher standards of conduct are expected of us . . ."

At this moment the door was flung open and Pamela Dare rushed in, somewhat breathlessly, to take her seat. She was very late.

"For instance," I continued, "there are really two ways in which a person may enter a room; one is in a controlled, dignified manner, the other is as if someone had just planted a heavy foot in your backside. Miss Dare has just shown us the second way; I'm quite sure she will now give us a demonstration of the first."

To this day I do not know what made me say it, but there it was. I was annoyed with the way in which she had just barged her way in, insolently carelessly late.

All eyes were on her as she had probably planned, but instead of supporting her entrance they were watching her, waiting to see the result of my challenge. She blushed.

"Well, Miss Dare?"

Her eyes were black with anger and humiliation, but she stood up and walked out, closing the door quietly behind her; then to my surprise, and I must confess, my relief, she opened it as quietly, and with a grace and dignity that would have befit a queen, she walked to her seat.

"Thank you. As from today there are certain courtesies which will be observed at all times in this classroom. Myself you will address as 'Mr. Braithwaite' or 'Sir'—the choice is yours; the young ladies will be addressed as 'Miss' and the young men will be addressed by their surnames."

I hadn't planned any of this, but it was unfolding all by itself, and I hoped, fitting into place. There was a general gasp at this, from boys and girls alike.

Potter was the first to protest.

"Why should we call 'em 'miss', we know 'em."

"What is your name?"

"Potter."

"I beg your pardon?"

"Potter, Sir." The "Sir" was somewhat delayed.

"Thank you, Potter. Now, is there any young lady present whom you consider unworthy of your courtesies?"

"Sir?"

"Is there any one of these young ladies who you think does not deserve to be addressed as Miss?"

With one accord the girls turned to look at Potter, as if daring him; he quailed visibly before their converted<sup>1</sup> eyes and said: "No, Sir."

"You should remember, Potter, that in a little while all of you may be expected to express these courtesies as part of your jobs; it would be helpful to you to become accustomed to giving and receiving them."

I walked around my desk and sat in my chair. For the time being at least they were listening, really listening to me; maybe they would not understand every word, but they'd get the general import of my remarks.

1. **converted:** turned toward something

## Sample Multiple-Choice Items

### 1. Read the following sentence.

“With one accord the girls turned to look at Potter, as if daring him; he quailed visibly before their converted eyes and said: ‘No, Sir.’”

The word quailed in this sentence means

- A. shrank.
- B. smirked.
- C. felt proud.
- D. became happy.

**Correct response: A**

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-M1:** using knowledge of word meaning and developing basic vocabulary using various strategies (for example, context clues, idioms, affixes, etymology, multiple-meaning words)

### 2. The teacher is annoyed with Pamela Dare because

- A. she refused to listen.
- B. she was rude to Potter.
- C. her behavior was disrespectful.
- D. her exit from the room was noisy.

**Correct response: C**

**Standard 7:** Students apply reasoning and problem-solving skills to their reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M1:** using comprehension strategies (for example, summarizing, recognizing literary devices, paraphrasing) to analyze oral, written, and visual texts

3. In this passage, the teacher's actions can **best** be described as

- A. rude.
- B. careless.
- C. vindictive.
- D. unrehearsed.

**Correct response: D**

**Standard 7:** Students apply reasoning and problem-solving skills to their reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M1:** using comprehension strategies (for example, summarizing, recognizing literary devices, paraphrasing) to analyze oral, written, and visual texts

4. The **main** reason the teacher wants his students to practice courtesy is so they can

- A. graduate on time.
- B. make good grades.
- C. please their parents.
- D. prepare for the job market.

**Correct response: D**

**Standard 7:** Students apply reasoning and problem-solving skills to their reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M4:** using inductive and deductive reasoning skills across oral, written, and visual texts

## Sample Short-Answer Items

5. Describe a turning point in this passage and explain its significance.

### Scoring Rubric:

Score	Description
2	The student's response is complete. It <ul style="list-style-type: none"><li>describes a turning point in the passage</li></ul> <b>AND</b> <ul style="list-style-type: none"><li>explains its significance.</li></ul>
1	The student's response is partial. It <ul style="list-style-type: none"><li>describes a turning point</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>gives a vague description of its significance</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>demonstrates a limited awareness and/or may contain errors.</li></ul>
0	The student's response is incorrect, irrelevant, too brief to evaluate, or blank.

### Exemplary responses:

#### Turning points:

- The teacher is unsure of how his speech will be received.
- when the students listen in spite of themselves.
- when Pamela Dare accepts the teacher's instructions to enter the room properly
- when Potter says "Sir"
- when the girls support the teacher instead of Potter
- other plausible text-based responses

#### Significance:

- This was significant because the teacher wanted to get their attention, and this was proof that even though he was making it up as he went along, it was working and they continued to listen.
- similar to above; significance is that they are willing to change
- other plausible text-based responses

**Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.

**Benchmark ELA-6-M2:** identifying, comparing, and responding to a variety of classic and contemporary fiction and nonfiction literature from many genres (for example, novels, drama)

6. Based on the passage, what are **two** things that the teacher says or does that show he cares about the students?

**Scoring Rubric:**

Score	Description
<b>2</b>	The student's response is complete. It states at least two details showing Mr. Braithwaite's concern.
<b>1</b>	The student's response is partial. It <ul style="list-style-type: none"><li>states one detail showing Mr. Braithwaite's concern</li><li><b>OR</b></li><li>demonstrates a limited awareness and/or may contain errors.</li></ul>
<b>0</b>	The student's response is incorrect, irrelevant, too brief to evaluate, or blank.

**Exemplary responses:**

*Things teacher says or does:*

- All the way to school the teacher plans a way to reach the students.
- He tries to speak pleasantly.
- He says he will be reasonable.
- He offers to let them speak also.
- He says he wants to treat them like adults.
- He states the rules clearly and gives reasons for the rules, saying they will need these skills on the job.
- Other plausible text-based responses.

**Standard 1:** Students read, comprehend, and respond to a range of materials using a variety of strategies for different purposes.

**Benchmark ELA-1-M4:** interpreting (for example, paraphrasing, comparing, contrasting) texts with supportive explanations to generate connections to real-life situations and other texts (for example, business, technical, scientific)

## Short Passage

**The space exploration program has had some unintended consequences. Read this news article and then answer questions that follow.**

# Warning: Space Junk Dead Ahead

by Laura Daily

Space is littered with junk. Spacecraft parts, exploded rockets, dead satellites, camera lenses, nuts, bolts, and bits of wire orbit earth. More than 8,000 of the objects are bigger than a softball. Smaller objects number in the billions. One of the oldest was a spacesuit glove dropped by Major Edward H. White II in 1965 as he returned to his *Gemini 4* space capsule from a space walk. (The glove eventually reentered earth's atmosphere and burned.)

The U.S. Space Command in Colorado Springs, Colorado, uses radar to track larger objects. But people there also worry about the small stuff—even tiny flakes of paint.

Objects travel through space at 22,000 miles an hour. That means all space junk, no matter what size, threatens spacecraft, satellites, and astronauts. A pea-size piece of debris in space carries the destructive punch of a 400-pound object hurtling along at 60 miles an hour on earth.

“The bigger the object and the longer it stays in space, the greater its chances of being hit by orbiting debris,” says George Levin of the National Aeronautics and Space Administration (NASA). An orbital debris expert, he calls himself a “space garbologist.”

NASA designed a satellite the size of a school bus to test the effects of being in space a long time. The Long Duration Exposure Facility

orbited earth for more than five and a half years. It was hit by about 34,000 pieces of space debris.

The International Space Station, scheduled for completion in 2002, is expected to be in orbit for at least 15 years. You do the math—that’s a lot of potential hits! Scientists are working on special shields to protect the station’s exterior. Astronauts working outside the station may carry bullet-proof umbrellas.

“Shuttles can be maneuvered out of the way of the big objects, and spacecraft can be designed to survive the stuff too small to be seen,” says Levin. “It’s the things larger than a golf ball and smaller than a softball we worry about. (They’re too small to see and dodge, and too large to protect against.) If you get hit, it’s a bad day.”

While astronauts have to worry about flying space junk, people on earth don’t. Most falling space debris, such as Major White’s glove, burns up in the earth’s atmosphere. Sometimes a piece makes it to the planet’s surface, but it usually falls harmlessly into the ocean.

There’s no good way to clean up space. Instead, scientists are taking steps to create less space trash. Spacecraft are now designed so that parts don’t break off in space. Astronauts have stopped flinging things overboard. It was a cargo ship hauling away potential space junk that accidentally crashed into the space station *Mir* during a test maneuver last summer. These cargo ships make deliveries to the station, carry away trash, and disintegrate reentering the atmosphere.

“We can’t get rid of what’s already in space,” Levin points out. “But we can reduce what we leave behind.”

### Sample Multiple-Choice Items

1. Shuttles avoid damage by large pieces of space junk by
  - A. hitting the debris and breaking it up.
  - B. steering out of the path of the debris.
  - C. carrying protective umbrellas or shields.
  - D. using special equipment to destroy the debris.

**Correct response: B**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M4:** using inductive and deductive reasoning skills across oral, written, and visual texts

2. This passage is **best** described as an informational article because it
  - A. has an unusual setting.
  - B. has a historic background.
  - C. uses technical vocabulary.
  - D. has facts that can be verified.

**Correct response: D**

**Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.

**Benchmark ELA-6-M3:** classifying and interpreting various genres according to their unique characteristics

3. The purpose of the Long Duration Exposure Facility was to
  - A. orbit Earth for five and a half years.
  - B. retrieve objects lost from spacecraft.
  - C. determine the effects of long-term orbiting.
  - D. measure the speed at which most debris travels.

**Correct response: C**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M1:** using comprehension strategies (for example, summarizing, recognizing literary devices, paraphrasing) to analyze oral, written, and visual texts

4. The author's purpose in writing this passage is to

- A. describe the duties of a garbologist.
- B. explain the handling of orbital debris.
- C. show the importance of the space station.
- D. discuss the potential danger of space junk.

**Correct response: D**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M3:** interpreting the effects of an author's purpose (reason for writing) and viewpoint (perspective)

## Sample Short-Answer Item

5. Use facts from the article to complete the chart below.

**Objects in Space**

<b>Origin</b>	
<b>Size</b>	
<b>Velocity</b>	
<b>Destructive Power</b>	

## Scoring Rubric:

Score	Description
2	The student's response is complete. It fills in four boxes in the chart with the correct information.
1	The student's response is partial. It <ul style="list-style-type: none"><li>• fills in two or three boxes in the chart with the correct information</li><li>OR</li><li>• demonstrates a limited awareness and/or may contain errors.</li></ul>
0	The student's response is incorrect, irrelevant, too brief to evaluate, or blank.

## Exemplary responses:

<b>Origin</b>	any one of these: spacecraft parts, exploded rockets, dead satellites, camera lenses, nuts, bolts, and bits of wire
<b>Size</b>	either of these: 8,000 objects are larger than a softball; small objects number in the billions
<b>Velocity</b>	22,000 miles per hour
<b>Destructive Power</b>	a pea-size piece of debris is equivalent to a 400-pound punch at 60 miles an hour

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-M4:** using inductive and deductive reasoning skills across oral, written, and visual texts

## Long Nonfiction

**Read this news article about the discovery of a sunken ship from colonial days and then answer the questions.**

**Historical Background:** In 1682, the French explorer René-Robert Cavelier, Sieur de La Salle, traveled the Mississippi River and claimed the whole area as French territory. Much of the same territory was also claimed by Spain.

A few years later, La Salle set sail for the mouth of the Mississippi with four ships and some two hundred colonists. By mistake, the expedition arrived in the area of Matagorda Bay, Texas. Through mishaps and storms, two of the ships were lost.

La Salle's expedition was perceived by Spain as a threat. The Spaniards sped up the establishment of missions in the region to firmly cement their claim to what is now the southwestern United States.

### A “Beautiful” Historic Discovery

by Pam Wheat

**Pam Wheat served as education coordinator for the Texas Historical Commission during the La Salle Shipwreck Project.**

Historians and treasure hunters had long known of the Spanish map that contained a drawing of a wrecked ship. The vessel's exact location was a mystery, but its identity was known. It was the *Belle*, a ship that was lost in 1686 during La Salle's last unsuccessful expedition.

In the summer of 1995, archaeologists from the Texas Historical commission, clad in scuba gear, dove into the waters of Texas's Matagorda Bay to begin exploring. They swept the area with a floating magnetometer. They came to a location that indicated a high concentration of metal. The divers came up with a true archaeological find—a bronze cannon decorated with the coat of arms of a French admiral. They had found the *Belle*.

Once the cannon was identified, the archaeologists needed an excavation plan. But the water was too muddy to see what they were doing. They solved this problem by constructing a cofferdam, a structure to surround their discovery and keep the water away from the site. Once the cofferdam's walls were in place, the water was pumped out. An excavation then was conducted as if the site were on dry ground.

A grid was laid out to record the position of everything that was found. Using coordinates, the archaeologists drew maps to show the exact location of every artifact. Each artifact was numbered before it was removed so the ship could be recreated later on land.

Ten archaeologists worked seven days a week for eight months. They carefully excavated the site. Many volunteers from around Texas also assisted in sifting the soil to be sure all the artifacts were found.

The archaeologists discovered that the *Belle* had been packed carefully in three sections. The front of the ship (bow) held an anchor rope, other supplies, and a surprise—the skeleton of a sailor who had probably crawled into the space and died there. His skull was later cast in a lab, and a facial reconstruction showed how he might have looked. Archaeologists were able to tell that this sailor was approximately forty-five years old, and his joints showed signs of arthritis.

In the ship's midsection, the main cargo was packed tightly. There were crates and barrels that contained trade goods like glass beads, iron axe heads,

and brass bells. Archaeologists found plates for eating and pots for cooking. They also discovered weapons and ammunition like muskets, swivel guns, lead shot, and cannonballs.

From the ship's manifest, archaeologists knew that the *Belle* had sailed with four cannon packed in her hold. The cannon were to be used as the main weapons at a fort that La Salle wanted to build at the mouth of the Mississippi River. As the archaeologists reached the bottom of the ship's hold in 1997, they found two more bronze cannon to add to the one found in 1995. They also discovered the imprint of the fourth cannon, which is still missing.

The preservation of the *Belle* and its contents is remarkable. After all, the wreck was found 309 years after it sank and in 12 feet of water. Yet, some remains were visible on the bay floor when the water was pumped out of the cofferdam. Apparently, a layer of muck had created an anaerobic<sup>1</sup> environment that sealed the remains and prevented rotting. Much of the wooden ship itself stayed intact, perhaps because it was constructed originally of hearty oak. Planking (lumber), framing timbers, and the ship's keel were found still bound by iron fasteners.

After archaeologists carefully recorded each piece of the ship and its contents that they had found, everything was removed to a lab to be cleaned. Current plans call for the *Belle* to be reconstructed and displayed at a museum, thus bringing new insight to the study of history during La Salle's lifetime.

1. **anaerobic:** the absence of oxygen

**Sample Extended-Response Item for “Warning: Space Junk Dead Ahead” and “A ‘Beautiful’ Historic Discovery”**

1. Think about the passages “Warning: Space Junk Dead Ahead” and “A ‘Beautiful’ Historic Discovery.” Both passages deal with objects that have been lost during explorations. Describe at least **two** differences between the lost objects in these two passages **and** explain why the objects in one passage might encourage exploration, whereas the objects in the other could be an obstacle to exploration.

**Scoring Rubric:**

Score	Description
<b>4</b>	The student’s response is complete. It <ul style="list-style-type: none"><li>describes two differences between the objects</li></ul> <b>AND</b> <ul style="list-style-type: none"><li>explains how some objects encourage exploration</li></ul> <b>AND</b> <ul style="list-style-type: none"><li>explains how some objects discourage exploration.</li></ul>
<b>3</b>	The student’s response is general. It <ul style="list-style-type: none"><li>describes two differences between the objects and how these objects encourage exploration</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>describes one difference and states how these objects encourage or discourage exploration.</li></ul>
<b>2</b>	The student’s response is partial. It <ul style="list-style-type: none"><li>describes one or two differences between the objects</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>explains how some objects encourage exploration</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>explains how some objects discourage exploration.</li></ul>
<b>1</b>	The student’s response is partial. It <ul style="list-style-type: none"><li>describes one or two differences between the objects</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>how these objects encourage or discourage exploration</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>demonstrates a limited awareness and/or may contain errors.</li></ul>
<b>0</b>	The student’s response is incorrect, irrelevant, too brief to evaluate, or blank.

**Exemplary responses:**

*What was lost and how they differ:*

- In “Space Junk,” the lost objects are mostly trash. They are bits and pieces of unwanted items. Even when they are found, they are not useful or interesting because they provide no historical information.
- In “Historic Discovery,” the lost objects are pieces of history. They were not thrown away; they were lost at sea.
- Other plausible text-based responses.

*Why these objects encourage or hinder exploration:*

- The items in “Space Junk” are a barrier to further exploration because they can damage space vessels. Thus, they are negative items.
- In “Historic Discovery,” the lost object is viewed as a historical find, one that will shed new light on the life and times of the late 1600s. This discovery is viewed in a positive light and further exploration is encouraged.
- Both objects are viewed as “challenges.” Archaeologists had to overcome difficulties to find the *Belle*. Researchers have to find ways to avoid space junk.
- Other plausible text-based responses.

**Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.

**Benchmark ELA-6-M2:** identifying, comparing and responding to a variety of classic and contemporary fiction and nonfiction literature from many genres (for example, novels, drama)

## Using Information Resources

Following is a set of information resources and items used on eighth-grade LEAP assessments. The grade 8 assessment focuses primarily on measuring student ability to **select** information.

**Introduction:** In this session of the test you are asked to look at some reference materials and then use the materials to answer the question that follow.

**Research Topic:** Drums of the World

Suppose you want to write report about drums as they are used around the world. Five different sources of information about drums are included in this test session. The information sources and the page numbers where you can find them are listed below.

1. Article from a Magazine, "Drums of the Inuit" (page XX)

2. Excerpt from a Book, *Music: An Appreciation*  
"Rhythm and Percussion" (page XX)

3. Diagram  
The Orchestra (page XX)

4. Internet Web Site Information (page XX)  
The Early News Gallery: Burmese Drum (page XX)

5. Excerpts from Books on Drums  
a. Copyright Page (page XX)  
b. Table of Contents Page (page XX)  
c. Bibliography Page (page XX)

**Directions:** Skim pages XX through XX to become familiar with the information contained in these sources. Remember that these are reference sources, so you should not read every word in each source. Once you have skimmed the sources, answer the questions on pages XX and XX. Use the information sources to answer the questions. As you work through the questions, go back and read the parts that will give you the information you need.

1. Article from a Magazine  
“Drums of the Inuit”

### **Drums of the Inuit**

The Inuit, native inhabitants of the Arctic polar region, have made drums for centuries. Traditionally, drum makers stretched the inner membrane of a walrus, or other animal hunted by the Inuit, over a round frame of driftwood or bone. The resulting highly resonant qilaut, or frame drum, produced different sounds as it was struck on either the skin, frame, or handle. A medicine man or other designated drummer would strike the drum, and the songs, although varying by occasion and singer, often related Inuit legends and customs. Births and marriages, successful hunts, ceremonies honoring visitors, and the need for physical healing or spiritual guidance were all reasons for a drum dance in the past. These events ranged in size from a few participants to large social gatherings drawing people from great distances.

Today, drum dances are held more to entertain tourists than to mark life events. Drum makers sometimes use nontraditional materials, such as nylon or goatskin, for drum skins. However, the occasional drum dances still serve the same socializing function they did in the past. Succeeding generations of children still learn the drum dance songs and, with them, the old legends and ways of life. The continued use of the qilaut helps the Inuit retain their cultural identity despite the influences of the modern world.

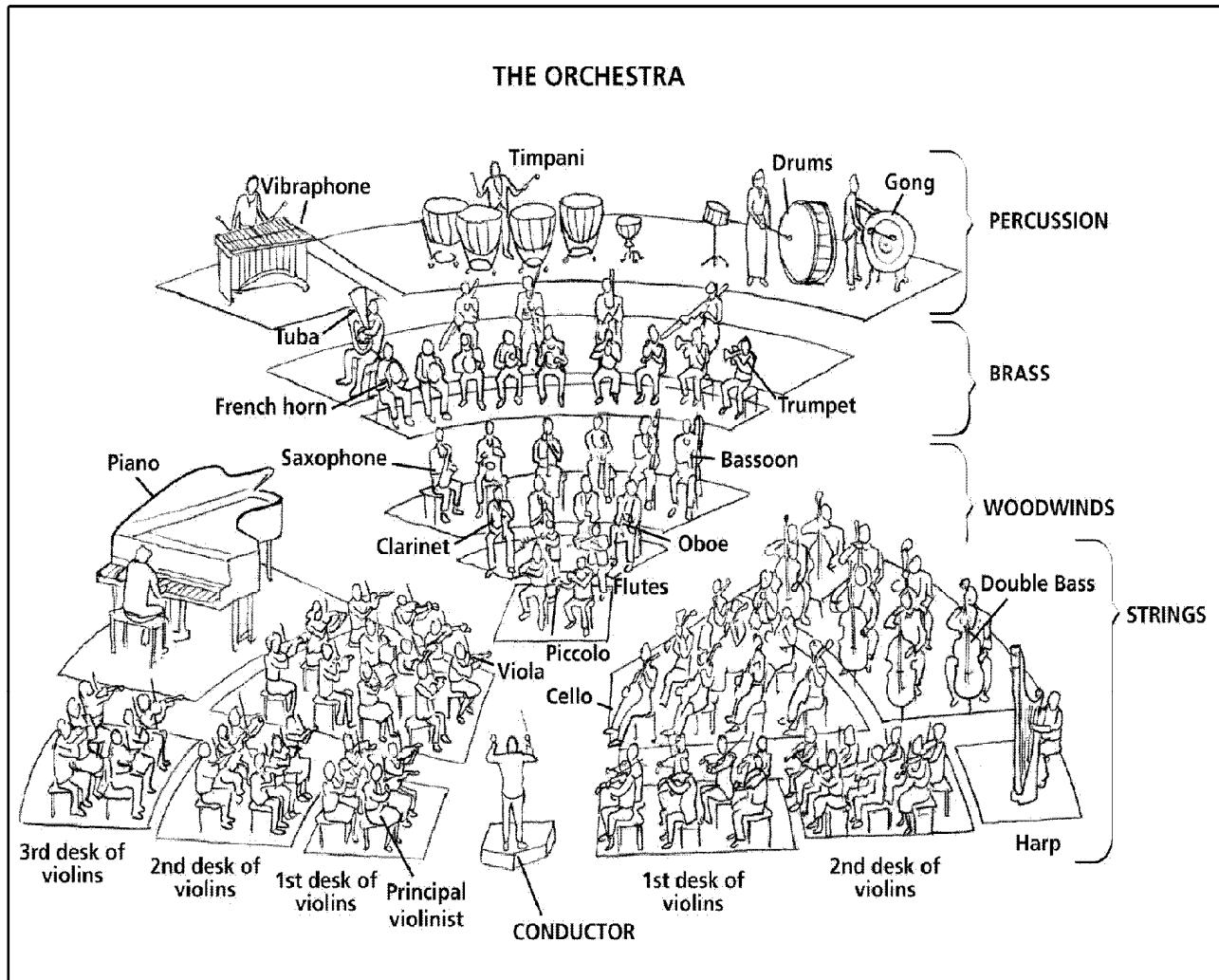
2. Excerpt from a Book, *Music: An Appreciation*  
**“Rhythm and Percussion”**

### **Rhythm and Percussion**

Rhythm and percussive sounds are highly emphasized in African music. This rhythmic and percussive emphasis reflects the close link between music and dance in African culture. The rhythmic organization of African music tends to be complex. Usually, several different rhythmic patterns are played simultaneously and repeated over and over. Each instrument goes its own rhythmic way, producing accents that appear to be out of phase with those of the other parts. Dancers may choose any of several rhythmic patterns to dance to. For example, while one dancer follows a bell's pattern, another may dance to the rattle, while yet another follows the drum.

Percussion ensembles consisting mainly of drums, xylophones, or rattles are widely employed. The instruments of percussion ensembles are carefully chosen to provide contrasts of tone color and pitch. The human body itself is often used as a percussion instrument. Handclaps, foot stamps, and thigh or chest slaps are common sounds in African music.

3. Diagram  
**The Orchestra**



4. Internet Web Site Information  
**The Early News Gallery: Burmese Drum**

<http://www.newseum.org/virtual/history/hga101.htm>

**THE EARLY NEWS GALLERY**

*Spoken News*

**Burmese drum**

**Asia-** The beating drum carries news farther and faster than the human voice. Like language, drums appear all over the world. These, from Asia, announce ceremonies and religious services, call councils together, and alert nearby villages of danger. Drums, gongs and horns are used together to spread that oldest of news stories: a death.

*— Drum, Asia, late 19th century  
Newseum collection*



←---- Back to the timeline

5. Excerpt from Books on Drums  
a. Copyright Page

DRUMS THROUGH THE AGES

*Copyright, 1960, by Charles L. White. Printed in the United States of America. All rights in this book are reserved. No part of it may be used or reproduced without written permission except in the case of brief quotations for use in critical articles and reviews. For information address The Sterling Press, Inc., 1150 Santee Street, Los Angeles 16, California.*

First Printing

THE FOLLOWING EXCERPTS:

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Library of Congress catalog card number: 60-53596.

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5. Excerpt from Books on Drums  
c. Bibliography Page

## V. JAZZ

### General

Hall, George. *The Complete Encyclopedia of Jazz*, rev. ed. New York: Perspectives, 2000.

Kelley, Michael C. *Jazz Stylin'*. Englewood Cliffs, N.J.: Cubby Row, 1978.

McArthur, John. *Jazz: In the Groove*. Hoboken, N.J.: MPRESS, 1982.

Sculley, Gertrude. *Jazz in the Morning: Its Roots and Musical Development*. New York: Oxnard Press, 1968.

South, Linda. *Black Americans and their Music: A History*. New York: North Hill Press, 1971.

Trevor, Frank. *Jazz: A History*. New York: North Hill Press, 1977.

Wilson, Justice. *All That Jazz: A Listener's Introduction to Jazz*, rev. ed. New York: Perspectives, 1968.

### Specific Topics

Blyton, Rita. *They Played Jazz All the Time*, 4th ed. New York: Elm Street Publications, 1971.

Charters, Samuel B. *Blues, New Orleans Style*. New York: Lexington Publishers, 1959.

Keil, Charles. *Kansas City Blues*. St. Louis: University of St. Louis, 1966.

Williams, Martin. *The Best of Jazz, 1957-1969*. New York: MPRESS, 1970.

## VI. ROCK

Dexter, Heath. *The Beat and the Beatles*, rev. ed. New York: North Hill Press, 1978.

Gerard, Jaques. *City Beat*, 2d ed. New York: First Street Publishers, 1972.

Moeller, Jim. *An Illustrated History of Rock & Roll*. New York: Riley House, 1976.

Roxy, Lorna. *Rock of Ages*. New York: Peters & Miller, 1974.

Stanford, Lillian. *Pop, Rock & Soul*. New York: St. Marie Press, 1977.

## VII. NON-WESTERN MUSIC

### General

Hill, Margaret. *Music Around the World*. New York: Riley House, 1971.

Maxim, William C. *Music of the Waves: The Music of the Pacific Islanders*. Englewood Cliffs, N.J.: Perspectives, 1977.

Merrit, James Matthew. *Music & Anthropology*. Evanston, Ill.: University Press, 1964.

*Music & Education Journal*. October 1972 (issue devoted to non-Western music).

Nix, Brett. *Songs Our Ancestors Sang*, 2d ed. Hightstown, N.J.: ExPressions, 1973.

Radforth, David. *Earth Music*. New York: Schaffers & Sons, 1977.

Selby, Constance. *Music Among the Ruins: The Music of the Ancient World*. New York: MPRESS, 1943.

## **Models of Bibliography Entries**

The following five sample entries are based on formats from the *Modern Language Association (MLA) Handbook for Writers of Research Papers*. They show some acceptable formats for bibliography entries.

### **A Book by a Single Author**

Levy, Ellen. Bird Habitats. New York: Bunting Press, Inc., 1997.

### **A Book by More than One Author**

Varick, William M., and Geraldine Abernathy. Endangered Birds of California. San Francisco: Wild World Publications, 1996.

### **An Encyclopedia Entry**

“Extinct Birds.” Encyclopedia Americana. 1998.

### **A Magazine Article**

Alfaro, Lorenzo. “Exploring Off the Beaten Path.” Natural Life 25 August 1997: 21–28.

### **Book Issued by Organization Identifying No Author**

American Birding Association. Warbler Identification Guide. Chicago: American Birding Association, 1995.

All items in the Using Information Resources session measure benchmarks of **standard 5**: Students locate, select, and synthesize information from a variety of texts, media, references, and technological sources to acquire and communicate knowledge.

## Sample Multiple-Choice Items

1. Which resource would lead you to the **most** information on the various uses of percussion instruments in Eastern and Western cultures?
  - A. the table of contents page
  - B. “Drums of the Inuit”
  - C. The Early News Gallery
  - D. The Orchestra diagram

**Correct response: A**

**Benchmark ELA-5-M2:** integrating information resources

2. According to the diagram labeled “The Orchestra,” which section has the **largest** number of instruments played by the **fewest** musicians?
  - A. strings
  - B. woodwinds
  - C. brass
  - D. percussion

**Correct response: D**

**Benchmark ELA-5-M6:** interpreting graphic organizers (for example, flowcharts, timelines, tree diagrams)

3. Which resource provides information about obtaining permission to reproduce parts of a book?
  - A. the Web site page
  - B. the copyright page
  - C. the table of contents page
  - D. the bibliography page

**Correct response: C**

**Benchmark ELA-5-M1:** identifying and using organizational features of printed text, other media, and electronic information (for example, microprint, CD-ROM, e-mail)

4. Which of the following sources offers the **most** information on the drumming practices of the Native Arctic people?

- “Drums of the Inuit”
- the table of contents page
- the bibliography page
- “Rhythm and Percussion”

**Correct response: A**

**Benchmark ELA-5-M2:** integrating information resources

**Sample Short-Answer Item**

5. Using information from the *Drums through the Ages* copyright page, write a bibliography entry for the book. Use the most appropriate format shown on page XX as your model.

**Scoring Rubric:**

Score	Description
2	The student’s response is complete. It provides a correct bibliographical entry.
1	The student’s response is partial. It <ul style="list-style-type: none"><li>• provides a bibliographical entry with at least two correct parts</li><li>OR</li><li>• may contain two minor punctuation errors.</li></ul>
0	The student’s response is incorrect, irrelevant, too brief to evaluate, or blank.

**Exemplary response:**

White, Charles L. Drums through the Ages. Los Angeles: The Sterling Press, 1960.

**Benchmark ELA-5-M5:** citing references using various formats (for example, endnotes, annotated bibliographies)

## Proofreading

Following are a proofreading passage and four multiple-choice items that appeared on a grade 8 LEAP assessment. On the actual test, this session includes eight multiple-choice items.

### Colonial Druggists

When people were sick in early America, druggists couldn't just hand them a bottle of pills. They had to find the ingredients for it, and then make the pills themself. Usually, they even had to guess about the best treatment for the sickness.

1 Medicine was a very new science.

Mixing all the ingredients into one prescription sometimes takes half a day or more for Colonial druggists. They kept a large supply of liquids and powders in the store.  
2 They also have to gather roots and plants from the field and forest for much of their  
3 ingredients. Then they dried them, boiled them, or ground them to a form they could use.

Colonial druggists didn't need special training to open a shop in early times. Anyone could prepare medicines and then hope that something in them would help a headache or a cold. The medicines usually were bitter and unpleasant to taste. Even if  
the ingredients didn't help the patients still might have claimed to be cured—just so they  
4 didn't have to take the medicine anymore!

All items in the Proofreading session measure benchmarks of **standard 3:** Students communicate using standard English grammar, usage, sentence structure, punctuation, capitalization, spelling, and handwriting.

1. How should you correct the error in number 1?

- A. change **themself** to **themselves**
- B. change **themself** to **theirself**
- C. change **themself** to **theirselves**
- D. There is no error.

**Correct response: A**

**Benchmark ELA-3-M4:** demonstrating understanding of the parts of speech to make choices for writing

2. How should you correct the error in number 2?

- A. change **for** to **of**
- B. change **Colonial** to **colonial**
- C. change **druggists** to **druggists'**
- D. There is no error.

**Correct response: B**

**Benchmark ELA-3-M2:** demonstrating use of punctuation (for example, colon, semicolon, quotation marks, dashes, parentheses), capitalization, and abbreviations

3. How should you correct the error in number 3?

- A. change **roots** to **routes**
- B. change **forest** to **forrest**
- C. change **much** to **many**
- D. There is no error.

**Correct response: C**

**Benchmark ELA-3-M3:** demonstrating standard English structure and usage by using correct and varied sentence types (compound and compound-complex) and effective personal styles

4. How should you correct the error in number 4?

- A. change **Even if** to **Even, if**
- B. change **help** to **help,**
- C. change **patients** to **patience**
- D. There is no error.

**Correct response: B**

**Benchmark ELA-3-M2:** demonstrating use of punctuation (for example, colon, semicolon, quotation marks, dashes, parentheses), capitalization, and abbreviations



## Chapter 2: LEAP Mathematics, Grade 8

This section describes the overall design of the LEAP Mathematics test to be administered to students in grade 8. Test specifications, sample test questions, and scoring rubrics are provided so that teachers may align classroom practices with the state assessment.

### Test Structure

**The Mathematics test consists of three subtests which are administered in two phases, each phase in a single day:**

Phase 1:

- Constructed Response: a 4-item session that **allows** the use of calculators

Phase 2:

- Multiple Choice: a 30-item session that **does not** allow the use of calculators
- Multiple Choice: a 30-item session that **allows** the use of calculators

The suggested testing times for the Grade 8 LEAP Mathematics test listed in Table 2.1 are estimates only. The Mathematics test is **untimed**.

**Table 2.1: Suggested Testing Times**

Phase	Subtest Description	Number of Items	Testing Time
1	Constructed Response, calculator	4	60 minutes
2	Multiple Choice, no calculator	30	75 minutes
2	Multiple Choice, calculator	30	75 minutes
TOTAL		64	210 minutes

Information about additional time needed to read test directions to students and accomplish other activities related to test administration is included in the *LEAP Test Administration Manual*.

The Mathematics test is composed of criterion-referenced test (CRT) items. These items measure Louisiana GLEs that more closely match the Common Core State Standards (CCSS) focus areas.

### Item Types and Scoring Information

The test has sixty (60) multiple-choice items and four constructed-response items.

The multiple-choice items consist of an interrogatory stem and four answer options. These items assess a student's knowledge and conceptual understanding, and responses are scored 1 if correct and 0 if incorrect.

The constructed-response items, which involve a number of separate steps and application of multiple skills, are designed to assess one or more of the GLEs. The response format is

open-ended and may include numerical answers, short written answers, and other types of constructed response (e.g., solve and graph solutions of multi-step linear equations and inequalities). Students may be required to explain in writing how they arrived at their answers. These items are scored, according to an item-specific rubric, on a scale of 0 to 4 points.

### General Scoring Rubric for Grade 8 LEAP Mathematics Constructed-Response Items

4	<ul style="list-style-type: none"> <li>• The response demonstrates in-depth understanding of the relevant content and/or procedures.</li> <li>• The student completes all important components of the task accurately and communicates ideas effectively.</li> <li>• Where appropriate, the student offers insightful interpretations and/or extensions.</li> <li>• Where appropriate, the student uses more sophisticated reasoning and/or efficient procedures.</li> </ul>
3	<ul style="list-style-type: none"> <li>• The response demonstrates understanding of major concepts and/or processes, although less important ideas or details may be overlooked or misunderstood.</li> <li>• The student completes most important aspects of the task accurately and communicates clearly.</li> <li>• The student's logic and reasoning may contain minor flaws.</li> </ul>
2	<ul style="list-style-type: none"> <li>• The student completes some parts of the task successfully.</li> <li>• The response demonstrates gaps in conceptual understanding.</li> </ul>
1	<ul style="list-style-type: none"> <li>• The student completes only a small portion of the tasks and/or shows minimal understanding of the concepts and/or processes.</li> </ul>
0	<ul style="list-style-type: none"> <li>• The student's response is incorrect, irrelevant, too brief to evaluate, or blank.</li> </ul>

### Description of the Mathematics Test and GLEs Assessed

The Mathematics test was developed specifically for Louisiana. Committees of Louisiana educators reviewed all items for content and alignment with Louisiana's GLEs. Separate committees reviewed the items for potential bias and sensitive material.

The Mathematics test is **untimed**. Suggested times are estimates for scheduling sessions and assisting students in managing their time.

Students are given a Mathematics Reference Sheet to consult as a reference. Calculators may be used on two parts of the test.

As Louisiana students and teachers transition to the CCSS ([http://www.doe.state.la.us/topics/common\\_core.html](http://www.doe.state.la.us/topics/common_core.html)) and PARCC assessments ([http://www.doe.state.la.us/topics/common\\_core\\_assessments.html](http://www.doe.state.la.us/topics/common_core_assessments.html)), the Mathematics test will include only items measuring GLEs aligned to the CCSS. Table 2.2 provides a list of GLEs eligible for assessment during the transition. The table identifies the GLEs and the corresponding CCSS alignment. Some grade 8 GLEs align to CCSS at other grade levels but will continue to be taught and tested in grade 8 to decrease the possibility that the transition will create curricular gaps.

**Table 2.2: GLE Content to be Taught and Tested in 2012-13 and 2013-14**

GLE #	Grade-Level Expectation Text	Aligned CCSS #
1	Compare rational numbers using symbols (i.e., $<$ , $\leq$ , $=$ , $\geq$ , $>$ ) and position on a number line	Retained <sup>1</sup>
2	Use whole number exponents (0-3) in problem-solving contexts	Retained <sup>1</sup>
4	Read and write numbers in scientific notation with positive exponents	8.EE.3 8.EE.4
7	Use proportional reasoning to model and solve real-life problems	Retained <sup>1</sup>
9	Find unit/cost rates and apply them in real-life problems	Retained <sup>1</sup>
11	Translate real-life situations that can be modeled by linear or exponential relationships to algebraic expressions, equations, and inequalities	8.F.4
12	Solve and graph solutions of multi-step linear equations and inequalities	8.EE.7
13	Switch between functions represented as tables, equations, graphs, and verbal representations, with and without technology	Retained <sup>1</sup>
14	Construct a table of $x$ - and $y$ -values satisfying a linear equation and construct a graph of the line on the coordinate plane	Retained <sup>1</sup>
15	Describe and compare situations with constant or varying rates of change	8.F.5 8.F.4 8.EE.5
17	Determine the volume and surface area of prisms and cylinders	8.G.9 6.G.2 7.G.6 G- GMD.3
24	Demonstrate conceptual and practical understanding of symmetry, similarity, and congruence and identify similar and congruent figures	8.G.2 8.G.4
25	Predict, draw, and discuss the resulting changes in lengths, orientation, angle measures, and coordinates when figures are translated, reflected across horizontal or vertical lines, and rotated on a grid	8.G.1 8.G.3 8.G.2 8.G.4
26	Predict, draw, and discuss the resulting changes in lengths, orientation, and angle measures that occur in figures under a similarity transformation (dilation)	8.G.3 8.G.4
28	Apply concepts, properties, and relationships of adjacent, corresponding, vertical, alternate interior, complementary, and supplementary angles	8.G.5
31	Use area to justify the Pythagorean theorem and apply the Pythagorean theorem and its converse in real-life problems	8.G.6 8.G.7 8.G.8
38	Sketch and interpret a trend line (i.e., line of best fit) on a scatterplot	8.SP.2

<sup>1</sup> This GLE was moved to another grade but will be taught and tested in this grade to decrease the possibility that the transition will create curricular gaps.

GLE #	Grade-Level Expectation Text	Aligned CCSS #
46	<p>Distinguish between and explain when real-life numerical patterns are linear/arithmetic (i.e., grows by addition) or exponential/geometric (i.e., grows by multiplication)</p> <p>NOTE: The focus here will be on recognizing real-life numerical patterns which are linear since the CCSS does not require eighth-grade students to work with exponential growth.</p>	8.F.5

## Reporting Categories

To be more reflective of the focus areas of the CCSS at each grade, the GLEs available for assessment have been grouped into the Reporting Categories shown in Table 2.3. During the transition, the Reporting Categories replace the mathematics strands (e.g., Number and Number Relations, Algebra, etc.) for assessment purposes.

**Table 2.3: Grade 8 Mathematics Reporting Categories**

Reporting Category	GLEs Covered
Ratio, Proportion, and Algebra	7, 9, 11, 12, 13, 14, 15, 46
Number System	1, 2, 4
Measurement, Data, and Geometry	17, 24, 25, 26, 28, 31, 38

## Mathematics Test Specifications

Table 2.4 provides test specifications for the multiple-choice subtests of the grade 8 LEAP Mathematics assessment. The values in the table are approximations due to slight variations in the content across test forms at grade 8.

**Table 2.4: Grade 8 Mathematics Test Specifications**

Reporting Category	% of Total Points
Ratio, Proportion, and Algebra	60
Number System	15
Measurement, Data, and Geometry	25
<b>Total</b>	<b>100</b>

Sixty 1-point MC items plus four 4-point constructed-response items equals a 76-point test.

## Calculator Recommendations and Restrictions

It is recommended that a calculator be made available to **each** student for instructional and assessment purposes. As with all instructional materials, each individual district and school should determine which calculator best supports its mathematics curriculum and instructional program.

### Calculators recommended for instruction and assessment:

- K–4 students: four-function calculator
- 5–8 students: scientific calculator
- 9–12 students: scientific calculator with graphing capabilities

### Calculators not permitted on statewide assessment:

- handheld or laptop computers
- pocket organizers
- calculators with Computer Algebra Systems (CAS) or other symbolic manipulation capabilities
- calculators with paper tape
- calculators that talk or make noise
- calculators with QWERTY (typewriter-style) keypads
- electronic writing pads or pen input devices

## Sample Test Items: Grade 8 Mathematics

### Sample Mathematics Constructed-Response Items and Scoring Rubrics

Questions 1 and 2 show sample constructed-response items. Each item involves a number of separate steps and the application of multiple skills. The constructed-response items are designed to assess one or more of the GLEs. The items are scored using an item-specific rubric on a scale of 0 to 4 points.

1. Dani opened an account on a photo-sharing website. The website starts all new accounts with 20 stock photographs. Each week Dani uploads 25 of her photographs to the website without deleting any of the photographs in her account. Dani wrote the number pattern below to show how many photographs were in her account after each week.

45, 70, 95, 120 ...

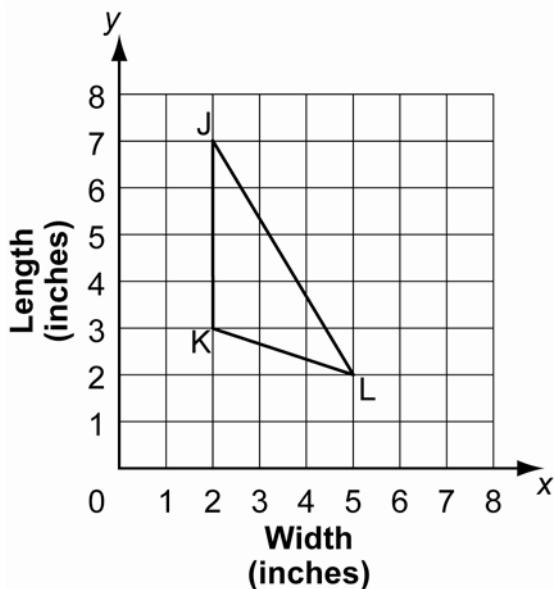
- A. Explain why this number pattern is arithmetic.
- B. Write an equation to relate  $x$ , the number of weeks since Dani opened her account, and  $y$ , the number of photographs uploaded to her account.
- C. How would Dani's equation change if the website started each account with 40 stock photographs instead of 20?
- D. How would Dani's equation from Part B change if she uploaded 50 photographs each week instead of 25?

*Match to GLE: This item measures GLE 11: Translate real-life situations that can be modeled by linear or exponential relationships to algebraic expressions, equations, and inequalities, GLE 15: Describe and compare situations with constant or varying rates of change and GLE 46: Distinguish between and explain when real-life numerical patterns are linear/arithmetic (i.e., grows by addition) or exponential/geometric (i.e., grows by multiplication). NOTE: The focus here will be on recognizing real-life numerical patterns which are linear since the CCSS does not require eighth-grade students to work with exponential growth.*

<b>Scoring Rubric</b>	
<b>4</b>	The student earns 4 points.
<b>3</b>	The student earns 3 points.
<b>2</b>	The student earns 2 points.
<b>1</b>	The student earns 1 point.
<b>0</b>	The student's response is incorrect or irrelevant to the skill or concept being measured or is blank.
<b>Sample Answer:</b>	
Part A. I know the number pattern is arithmetic because each term is found by adding the same number to the previous term.	
Part B. $y = 25x + 20$	
Part C. In Dani's equation the 20 would become 40.	
Part D. In Dani's equation the 25 would become 50.	
<b>Points Assigned:</b>	
Part A. 1 point 1 point for a valid mathematical explanation of how the student knows the number pattern is arithmetic, referring to the concept of adding the same number to each term	
Part B. 1 point 1 point for giving the correct linear equation for the pattern	
Part C. 1 point 1 point for correctly identifying that the 20 would change to 40.	
Part D. 1 point 1 point for correctly identifying that the 25 would change to 50.	

**Note:** Scorers should follow along with the student's work throughout. If student makes an error in a previous part and subsequent answers are correct based on the earlier error, student should not be penalized again.

2. Kineetra plotted triangle JKL on the coordinate grid shown below.



A. Kineetra reflected triangle JKL across a line so the coordinates of point L do not change but the coordinates of points J and K do change. Draw two lines on the coordinate grid that she could have reflected triangle JKL across.

B. After reflecting triangle JKL across the line, Kineetra dilates the figure by a factor of 3. What is the length of line segment JK after the dilation?

C. The measure of angle K in the original triangle was  $110^\circ$ . What is the angle measure after the reflection and the dilation?

*Match to GLE: This item measures GLE 25: Predict, draw, and discuss the resulting changes in lengths, orientation, angle measures, and coordinates when figures are translated, reflected across horizontal or vertical lines, and rotated on a grid and GLE 26: Predict, draw, and discuss the resulting changes in lengths, orientation, and angle measures that occur in figures under a similarity transformation (dilation).*

**Scoring Rubric**

<b>4</b>	The student earns 4 points.
<b>3</b>	The student earns 3 points.
<b>2</b>	The student earns 2 points.
<b>1</b>	The student earns 1 point.
<b>0</b>	The student's response is incorrect or irrelevant to the skill or concept being measured or is blank.

**Sample Answer:**

Part A. The student can draw any two lines that pass through point L but do not also pass through points J or K.

Part B. 12 inches

Part C.  $110^\circ$ ; when the triangle is reflected, the location of the figure changes, but the angle measure does not. When the triangle is dilated, the lengths of the sides increase, but the angle measure between the sides does not change.

**Points Assigned:**

Part A. 2 points

1 point for drawing a line through point L that does not pass through points J or K

**AND**

1 point for drawing a second line through point L that does not pass through points J or K

Part B. 1 point

1 point for correctly determining the length of line segment JK after the dilation

Part C. 1 point

1 point for correctly determining the angle measure of angle K

### Sample Multiple-Choice Items

Questions 3 through 24 are sample multiple-choice items, arranged by GLE. The items test students' ability to solve math problems. Most items are provided in context and require students to use information from stories, graphs, or tables to solve a problem. Items may assess some of the skills of a GLE, while other items may measure all of the skills of the GLE.

3. There were 24 books on the summer reading list. Susan has read  $\frac{5}{6}$  of the books on the list. Tom has read  $\frac{11}{12}$  of the books on the list. Vicky has read  $\frac{21}{24}$  of the books on the list. Which list correctly compares the fractions of books on the summer reading list that Susan, Tom, and Vicky have read?

A.  $\frac{5}{6} < \frac{11}{12} < \frac{21}{24}$

B.  $\frac{5}{6} < \frac{21}{24} < \frac{11}{12}$

C.  $\frac{11}{12} < \frac{21}{24} < \frac{5}{6}$

D.  $\frac{21}{24} < \frac{11}{12} < \frac{5}{6}$

**Correct response: B**

*Match to GLE: This item measures GLE 1: Compare rational numbers using symbols (i.e.,  $<$ ,  $\leq$ ,  $=$ ,  $\geq$ ,  $>$ ) and position on a number line.*

4. Robert graphed the thickness, in inches, of four different objects on the number line below.



The thickness of the desk was  $\frac{11}{8}$  inches. Which of Robert's points on the number line represents the thickness of the desk?

- A. point A
- B. point B
- C. point C
- D. point D

**Correct response: D**

*Match to GLE: This item measures GLE 1: Compare rational numbers using symbols (i.e.,  $<$ ,  $\leq$ ,  $=$ ,  $\geq$ ,  $>$ ) and position on a number line.*

5. Ramon writes the prime factorization of a number as  $5^2 \times 2^3$ . What number did Ramon write the prime factorization for?

- A. 60
- B. 80
- C. 150
- D. 200

**Correct response: D**

*Match to GLE: This item measures GLE 2: Use whole number exponents (0-3) in problem-solving contexts.*

6. Ayan has a box of 6 square pieces of glass. Each piece of glass has a side length of 4 inches. Ayan also has 2 other square pieces of glass each with a side length of 5 inches. She knows that to find the area of a single square piece of glass, she should multiply the length of the glass by its width. Which expression is equal to the total area of these 8 pieces of glass that Ayan has?

- A.  $6(2^4) + 2(2^5)$
- B.  $6(4^2) + 2(5^2)$
- C.  $(6 \times 2)^4 + (2 \times 2)^5$
- D.  $(6 \times 4)^2 + (2 \times 5)^2$

**Correct response: B**

*Match to GLE: This item measures GLE 2: Use whole number exponents (0-3) in problem-solving contexts.*

7. One of the planet Saturn's rings has a diameter of approximately  $2.5 \times 10^5$  kilometers. What is the diameter of the ring, in kilometers, written in standard notation?

A. 2,500  
B. 25,000  
C. 250,000  
D. 2,500,000

**Correct response: C**

*Match to GLE: This item measures GLE 4: Read and write numbers in scientific notation with positive exponents.*

8. The closest star to Earth is approximately  $3.99 \times 10^{13}$  kilometers away. When written in standard notation, how many zeros does this number contain before the decimal point?

A. 11  
B. 12  
C. 13  
D. 15

**Correct response: A**

*Match to GLE: This item measures GLE 4: Read and write numbers in scientific notation with positive exponents.*

9. Debbie keeps her marble collection in a jar. Of the 50 marbles in the jar, 15 are red, 10 are blue, 20 are green, and 5 are yellow. Debbie randomly chooses 30 marbles from the jar. How many of these marbles can she expect to be red?

- A. 3 marbles
- B. 6 marbles
- C. 9 marbles
- D. 12 marbles

**Correct response: C**

*Match to GLE: This item measures GLE 7: Use proportional reasoning to model and solve real-life problems.*

10. Henry bought a bag of 5 onions for a total cost of \$4.75. At that rate, how much would Henry pay for 12 onions?

- A. \$ 9.75
- B. \$11.40
- C. \$11.75
- D. \$16.75

**Correct response: B**

*Match to GLE: This item measures GLE 9: Find unit/cost rates and apply them in real-life problems.*

11. A package of 6 water bottles costs \$7.74. How much does each water bottle cost?

- A. \$0.74
- B. \$0.80
- C. \$1.29
- D. \$1.74

**Correct response: C**

*Match to GLE: This item measures GLE 9: Find unit/cost rates and apply them in real-life problems.*

12. A restaurant has small tables ( $s$ ) and large tables ( $l$ ). Small tables seat four people each, and large tables seat eight people each. Which inequality shows the maximum number of people ( $p$ ) that can be seated at the restaurant?

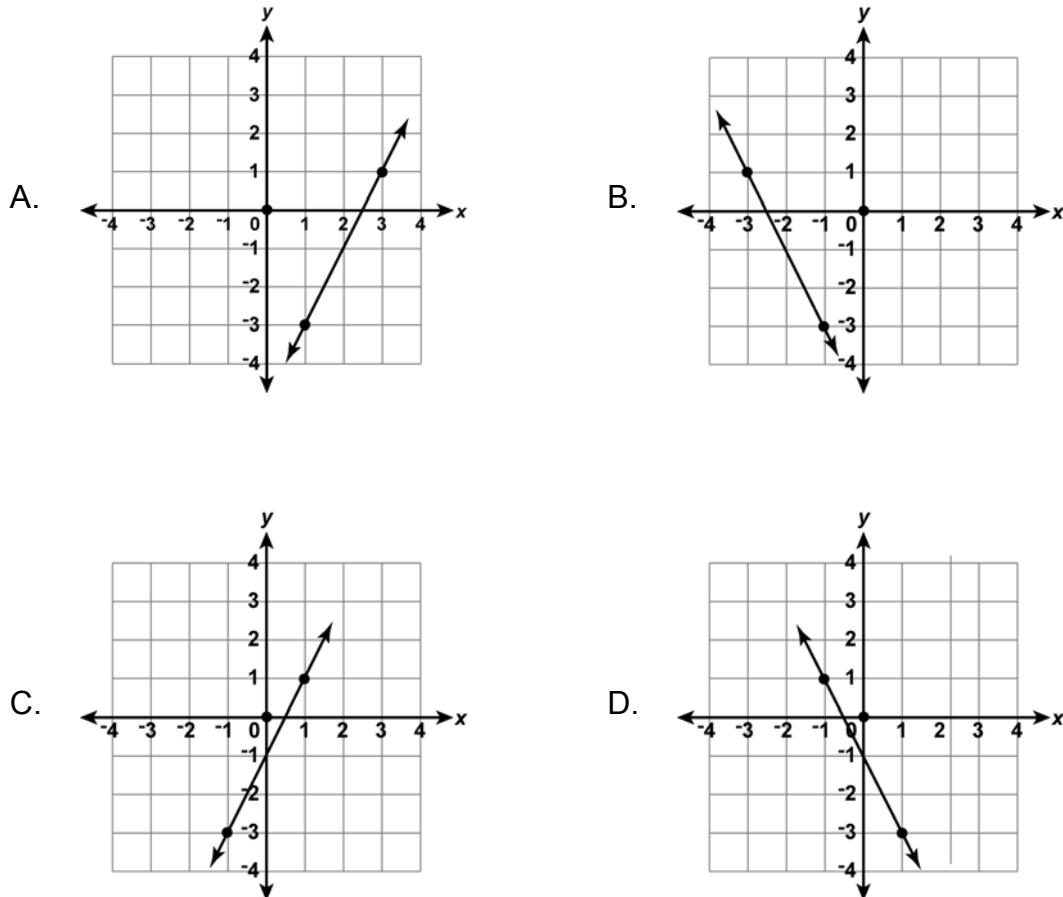
- A.  $p \geq 8l + 4s$
- B.  $p \leq 8l + 4s$
- C.  $p > 8l + 4s$
- D.  $p < 8l + 4s$

**Correct response: B**

*Match to GLE: This item measures GLE 11: Translate real-life situations that can be modeled by linear or exponential relationships to algebraic expressions, equations, and inequalities.*

13. Which of the following graphs represents this linear equation?

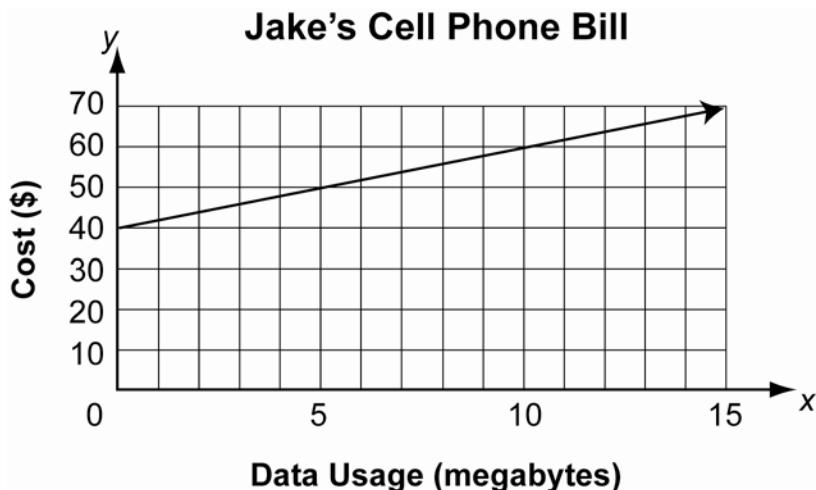
$$y = 2x - 5$$



**Correct response: A**

*Match to GLE: This item measures GLE 12: Solve and graph solutions of multi-step linear equations and inequalities.*

14. The cost of Jake's cell phone bill is determined by how many megabytes of data he uses each month, as shown in the graph below.



Which equation represents the cost of Jake's cell phone bill,  $y$ , based on his data usage in megabytes,  $x$ ?

- A.  $y = 0.5x + 40$
- B.  $y = 2x + 40$
- C.  $y = 40x + 0.5$
- D.  $y = 40x + 2$

**Correct response: B**

*Match to GLE: This item measures GLE 13: Switch between functions represented as tables, equations, graphs, and verbal representations, with and without technology.*

15. The cost, in dollars ( $y$ ), to exchange  $x$  US dollars for Brazilian reales at an airport can be found using the equation below.

$$y = 0.102x$$

Which table shows the cost,  $y$ , to exchange  $x$  US dollars for Brazilian reales at the airport?

<b>Cost to Exchange US Dollars for Brazilian Reales</b>		<b>Cost to Exchange US Dollars for Brazilian Reales</b>																																									
A.	B.	C.	D.																																								
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**Correct response: D**

*Match to GLE: This item measures GLE 14: Construct a table of  $x$ - and  $y$ -values satisfying a linear equation and construct a graph of the line on the coordinate plane.*

16. The cost per ticket to a baseball game depends on the number of tickets purchased by one person. If more tickets are purchased, the cost per ticket will be lower. The cost to purchase up to 5 tickets is \$12 per ticket. For every 5 additional tickets purchased (up to 50 tickets), the price per ticket is reduced by \$0.50. Which statement about the price per ticket is true?

- A. The price per ticket is the same for 3 tickets as it is for 9 tickets.
- B. The price per ticket is the same for 43 tickets as it is for 45 tickets.
- C. The price per ticket is \$0.50 lower for 23 tickets than it is for 29 tickets.
- D. The price per ticket is \$1.00 higher for 33 tickets than it is for 45 tickets.

**Correct response: A**

*Match to GLE: This item measures GLE 15: Describe and compare situations with constant or varying rates of change.*

17. Jose is painting the entire wooden cylinder shown below.



How many square feet does Jose have to paint?

A.  $2\pi$

B.  $8\frac{1}{4}\pi$

C.  $8\frac{1}{2}\pi$

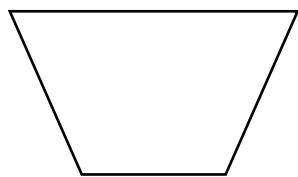
D.  $18\pi$

**Correct response: C**

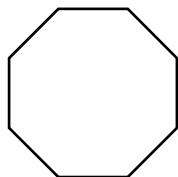
*Match to GLE: This item measures GLE 17: Determine the volume and surface area of prisms and cylinders.*

18. Which figure has exactly one line of symmetry?

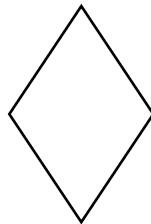
A.



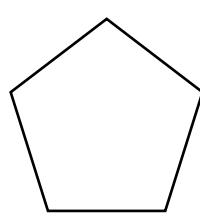
B.



C.



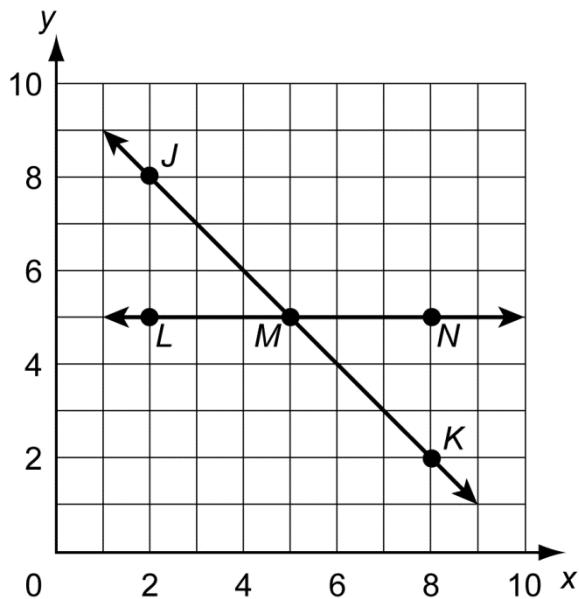
D.



**Correct response: A**

*Match to GLE: This item measures GLE 24: Demonstrate conceptual and practical understanding of symmetry, similarity, and congruence and identify similar and congruent figures.*

19. The coordinate grid below shows line JK and line LN, which intersect at point M.



The figure is reflected across a vertical line that passes through point M. Which point will be reflected onto the original location of point N?

- A. Point J
- B. Point K
- C. Point L
- D. Point N

**Correct response: C**

*Match to GLE: This item measures GLE 25: Predict, draw, and discuss the resulting changes in lengths, orientation, angle measures, and coordinates when figures are translated, reflected across horizontal or vertical lines, and rotated on a grid.*

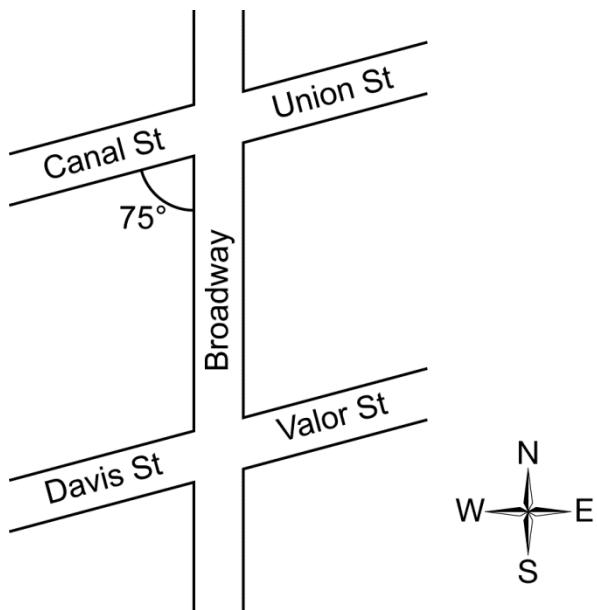
20. In quadrilateral JKLM, the measure of angle K is  $10^\circ$ . Quadrilateral JKLM is dilated by a factor of  $\frac{1}{2}$  to become quadrilateral J'K'L'M'. What is the measure of angle K'?

A.  $5^\circ$   
B.  $9\frac{1}{2}^\circ$   
C.  $10^\circ$   
D.  $20^\circ$

**Correct response: C**

*Match to GLE: This item measures GLE 26: Predict, draw, and discuss the resulting changes in lengths, orientation, and angle measures that occur in figures under a similarity transformation (dilation).*

21. In a town, some of the streets change names when they intersect with Broadway. Broadway is a straight road. In the map below, two of the intersections are shown.



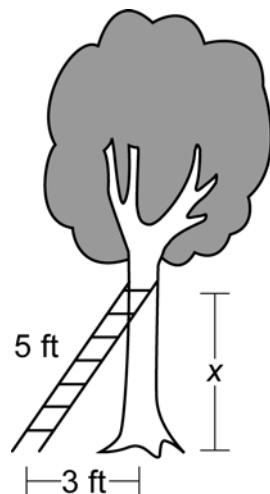
Canal St. and Davis St. are parallel to each other. The angle measure from the southern edge of Canal St. to Broadway is  $75^\circ$ . What is the angle measure from the northern edge of Davis St. to Broadway?

- A.  $75^\circ$
- B.  $105^\circ$
- C.  $115^\circ$
- D.  $285^\circ$

**Correct response: B**

*Match to GLE: This item measures GLE 28: Apply concepts, properties, and relationships of adjacent, corresponding, vertical, alternate interior, complementary, and supplementary angles.*

22. Helen's cat, Kitty, is stuck in the tree. In order to rescue Kitty, Helen must lean a five foot ladder against the tree, as shown in the diagram below. The distance between the bottom of the tree and the ladder is three feet.



How high above the ground is the top of the ladder, represented by the variable  $X$ ?

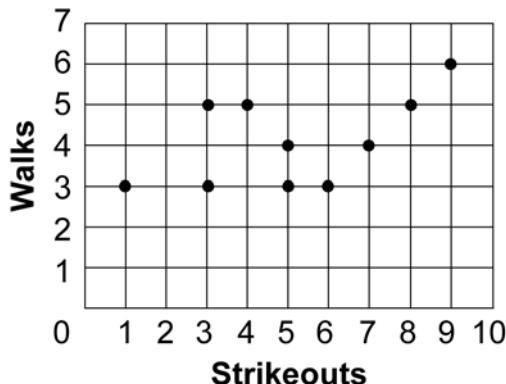
- A. 3 feet
- B. 4 feet
- C. 5 feet
- D. 6 feet

**Correct response: B**

*Match to GLE: This item measures GLE 31: Use area to justify the Pythagorean theorem and apply the Pythagorean theorem and its converse in real-life problems.*

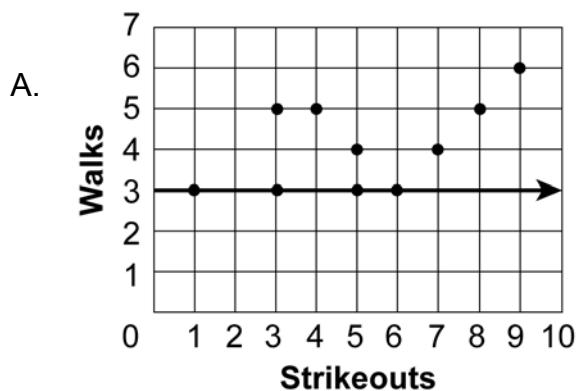
23. Kara made the scatterplot below to represent the number of strikeouts and walks each of 10 baseball players had last week.

**Comparing Strikeouts and Walks**

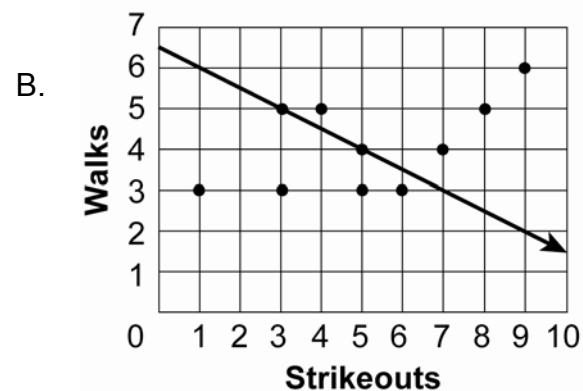


Which scatterplot shows the **best** line of best fit for Kara's scatterplot?

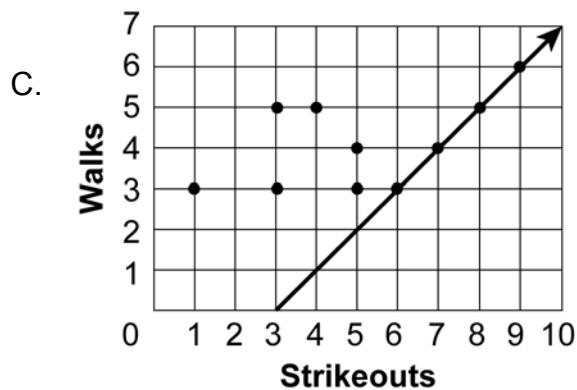
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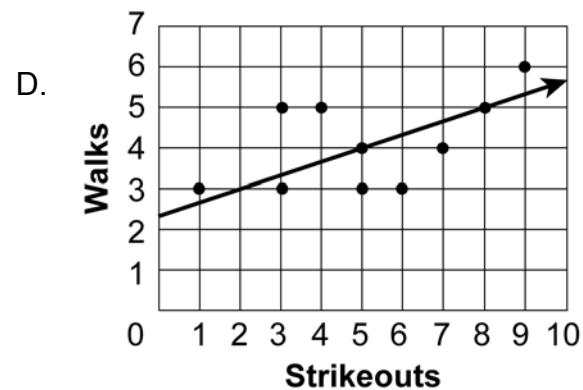
**Comparing Strikeouts and Walks**



**Comparing Strikeouts and Walks**



**Comparing Strikeouts and Walks**



**Correct response: D**

*Match to GLE: This item measures GLE 38: Sketch and interpret a trend line (i.e., line of best fit) on a scatterplot.*

24. Each spring Josh adds 3 tomato plants to the number of tomato plants he planted the year before. Which statement **best** describes the pattern of the number of tomato plants Josh has each year?

- A. The pattern is linear because each year Josh has 3 more tomato plants than the year before.
- B. The pattern is exponential because each year Josh has 3 more tomato plants than the year before.
- C. The pattern is linear because each year the number of tomato plants Josh has increases from the year before.
- D. The pattern is exponential because each year the number of tomato plants Josh has increases from the year before.

**Correct response: A**

*Match to GLE: This item measures GLE 46: Distinguish between and explain when real-life numerical patterns are linear/arithmetic (i.e., grows by addition) or exponential/geometric (i.e., grows by multiplication) NOTE: The focus here will be on recognizing real-life numerical patterns which are linear since the CCSS does not require eighth-grade students to work with exponential growth.*



## Chapter 3: LEAP Science, Grade 8

This chapter provides specifications for the Science test for grade 8 LEAP. It describes the contents and format of the test, provides the number and types of items, and explains how the strands, standards, benchmarks, and dimensions for Science are assessed.

### Test Structure

The Science test consists of three sessions and is administered in one day. Students are allowed as much time as they need to complete each session, but suggested times are provided in the *Test Administration Manual*; it explains the procedures for allowing students additional time to complete a session of the test.

**Session 1:** 40 multiple-choice items

**Session 2:** 4 short-answer items

**Session 3:** 1 comprehensive science task with 3 short-answer items and 1 extended constructed-response item

### Item Types

The Science test includes multiple-choice items, short-answer items scored with an item-specific 2-point rubric, and 1 extended constructed-response item scored with an item-specific 4-point rubric.

In Session 1, the multiple-choice items assess all five science strands. Each multiple-choice item consists of a stem and four answer options (A, B, C, and D).

In Session 2, independent short-answer items assess the four content strands.

In Session 3, the 3 short-answer items are inquiry-based, and the extended constructed-response item relates to the science content of the task.

**Note:** Science is composed of five strands—Science as Inquiry, Physical Science, Life Science, Earth and Space Science, and Science and the Environment. Of these, Science as Inquiry describes the inquiry processes, which is applied to each of the four strands that explore the content of science.

Any of the Science test items may include stimulus material, for example:

- data tables or graphs presenting data to be read or interpreted;
- charts, illustrations, or graphic organizers;
- descriptions and details of science investigations; and/or
- maps showing geographical features.

## Test Description

The grade 8 LEAP Science test assesses all five science strands:

- Science as Inquiry
- Physical Science
- Life Science
- Earth and Space Science
- Science and the Environment

The test items reflect the benchmarks and focus on both the *why* and the implications of phenomena in science, rather than focus on the *what* and the specific facts or details.

The **multiple-choice items** focus on important science concepts and the process of inquiry and allow students to show their breadth of understanding.

The **2-point short-answer items** address the unifying concepts and processes of science. These items allow students to reflect on a science concept, demonstrate their understanding, and make meaning from a given set of data. The wording of the items is direct and specific. Items that require multiple examples or reasons clearly state the exact number rather than a minimum (for example, “Give at least *two* reasons . . .”).

The **comprehensive science task** integrates the Science as Inquiry strand with at least one content strand (such as Science and the Environment). Students are provided with a written scenario that describes a scientific investigation. Students are required to read, use, and react to the scenario, which usually includes diagrams, data tables, and graphs. Students are also expected to make scientific conclusions based on this scenario. The types of test items that accompany the science task may include data tables for students to complete or interpret. Students may also be required to record data and observations about the scenario.

The reading level is minimized to the extent possible (except for necessary terms) so that students’ reading ability does not interfere with their ability to demonstrate their science knowledge and skills.

## Scoring the Science Sessions

Each multiple-choice item has four response options (A, B, C, and D) and is scored right/wrong. Correct answers receive a score of 1; incorrect answers receive a score of 0.

Science has seven 2-point short-answer items and one 4-point extended constructed-response item. The specific rubric for each of these items is developed from the general scoring rubrics for LEAP, GEE, and *i*LEAP.

**Table 3.1: General Scoring Rubric—Short-Answer Items**

<b>Score Level</b>	<b>Description of Score Level</b>
<b>2</b>	<ul style="list-style-type: none"><li>• The student's response provides a complete and correct answer.</li></ul>
<b>1</b>	<ul style="list-style-type: none"><li>• The student's response is partially correct.</li><li>• The student's response demonstrates limited awareness or contains errors.</li></ul>
<b>0</b>	<ul style="list-style-type: none"><li>• The student's response is totally incorrect, irrelevant, too minimal to evaluate, or blank.</li></ul>

**Table 3.2: General Scoring Rubric—Extended Constructed-Response Items**

<b>Score Level</b>	<b>Description of Score Level</b>
<b>4</b>	<ul style="list-style-type: none"><li>• The response demonstrates in-depth understanding of the relevant content and/or procedures.</li><li>• The student completes all important components of the task accurately and communicates ideas effectively.</li><li>• Where appropriate, the student offers insightful interpretations and/or extensions.</li><li>• Where appropriate, the student chooses more sophisticated reasoning and/or efficient procedures.</li></ul>
<b>3</b>	<ul style="list-style-type: none"><li>• The response demonstrates understanding of major concepts and/or processes, although less important ideas or details may be overlooked or misunderstood.</li><li>• The student completes the most important aspects of the task accurately and communicates clearly.</li><li>• The student's logic and reasoning may contain minor flaws.</li></ul>
<b>2</b>	<ul style="list-style-type: none"><li>• The student completes some parts of the task successfully.</li><li>• The response demonstrates gaps in conceptual understanding.</li></ul>
<b>1</b>	<ul style="list-style-type: none"><li>• The student completes only a small portion of the task and/or shows minimal understanding of the concepts or processes.</li></ul>
<b>0</b>	<ul style="list-style-type: none"><li>• The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.</li></ul>

## Science Test Specifications, Grade 8

**Table 3.3: Number of Multiple-Choice, Short-Answer, and Extended Constructed-Response Items by Strand**

Strand	Multiple-Choice (1 point)	Short-Answer (2 points)	ECR Items (4 points)	Score Points
1. Science as Inquiry	8	0		8
2. Physical Science	8	1		10
3. Life Science	8	1		10
4. Earth and Space Science	8	1		10
5. Science and the Environment	8	1		10
<b>Comprehensive Science Task</b>				
1. Science as Inquiry <u>Dimension 1</u> (Questioning, Planning, Doing, and Recording)		1		2
1. Science as Inquiry <u>Dimension 2</u> (Interpreting and Communicating)		2		4
2. Physical Science			1 (in one of the four strands)	4
3. Life Science				
4. Earth and Space Science				
5. Science and the Environment				
<b>Total Score Points</b>	<b>40</b>	<b>14</b>	<b>4</b>	<b>58</b>

## **STRANDS, STANDARDS, BENCHMARKS, AND DIMENSIONS ASSESSED**

Each of the five science strands is associated with a single standard. The *strand* name serves as a label referring to the full text of its associated *standard*. Each strand has several benchmarks that describe what students should know and be able to do in the context of the strands of science. This section lists the benchmarks that are assessed and explains how they are assessed.

**Strand SI: Science as Inquiry**

**Standard:** The students will *do* science by engaging in partial and full inquiries that are within their developmental capabilities.

**Strand PS: Physical Science**

**Standard:** Students will develop an understanding of the characteristics and interrelationships of matter and energy in the physical world.

**Strand LS: Life Science**

**Standard:** The students will become aware of the characteristics and life cycles of organisms and understand their relationships to each other and to their environment.

**Strand ESS: Earth and Space Science**

**Standard:** The students will develop an understanding of the properties of Earth materials, the structure of Earth's system, Earth's history, and Earth's place in the universe.

**Strand SE: Science and the Environment**

**Standard:** In learning environmental science, students will develop an appreciation of the natural environment, learn the importance of environmental quality, and acquire a sense of stewardship. As consumers and citizens, they will be able to recognize how our personal, professional, and political actions affect the natural world.

These strands, standards, and benchmarks are further explained by indicating levels of thinking called *dimensions*.

The dimensions of science were developed to explain the level of thinking expected in the assessment of each science benchmark. Some benchmarks are assessed at a level that requires the students to demonstrate scientific knowledge and understanding, which is dimension 1. The next level requires an explanation of scientific knowledge and understanding, which is dimension 2. The most complex level requires the application of scientific knowledge and understanding, which is dimension 3.

The dimensions of science indicate levels of complexity of thought, not necessarily levels of difficulty. A benchmark assessed at the level of dimension 1 may be more difficult than a benchmark assessed at the level of dimension 3 because of the difficulty of the content itself.

The dimensions indicate what students are expected to be able to do with the concepts, processes, and ideas for each strand. The two dimensions for the Science as Inquiry strand are different from the dimensions for the content strands. These two unique dimensions help define the skills and habits of the mind students exhibit when they actively engage with materials and consider new ideas or evidence.

Strand	Strand Dimensions
<b>Science as Inquiry (SI)</b>	1. Questioning, Planning, Doing, and Recording 2. Interpreting and Communicating
<b>Physical Science (PS)</b>	1. Understanding Essential Content and Concepts
<b>Life Science (LS)</b>	2. Explaining, Reflecting, and Connecting
<b>Earth and Space Science (ESS)</b>	3. Applying and Using Knowledge and Technology
<b>Science and the Environment (SE)</b>	

This section provides the following information:

**Strand:** This information is organized according to the five strands of science:

- Science as Inquiry
- Physical Science
- Life Science
- Earth and Space Science
- Science and the Environment

**Benchmarks Assessed:** the text of all benchmarks eligible for LEAP

**Dimensions:** The dimensions indicate what students are expected to be able to do with the concepts and processes for each strand and benchmark.

**Key Concepts:** important concepts that may be assessed

### Explanation of Benchmark Codes

Benchmarks are grouped by strand and thematic category. For example:

*Strand:* Physical Science

*Categories:* A. Properties and Changes of Properties in Matter  
B. Motions and Forces  
C. Transformations of Energy

Benchmarks are coded by strand, grade cluster (E, M, H), and benchmark number. The first term in the code refers to the strand. The second term refers to the grade cluster, and the third term refers to the category and benchmark number. Categories are indicated by letters.

**Table 3.4: Examples of Science Codes**

<b>Code</b>	<b>Translation</b>
SI-E-A5	SI strand, elementary level, category A, benchmark 5
PS-M-B4	PS strand, middle school level, category B, benchmark 4
SE-H-A6	SE strand, high school level, category A, benchmark 6

For most grade clusters, strands are divided into categories, or major topical areas. However, the SE strand has no categories for prekindergarten through 4 and 5 through 8.

## Science as Inquiry

Inquiry is an integral component of scientific literacy because it actively involves students in the process of science. Students become better problem-solvers and decision-makers while using the tools, techniques, and habits of mind characteristic of scientific inquiry. Decision-making includes recognition of the impact of actions and accountability for one's choices.

Dimension 1: Questioning, Planning, Doing, and Recording	
Benchmarks Assessed	
SI-M-A1	identifying questions that can be used to design a scientific investigation
SI-M-A2	designing and conducting a scientific investigation
SI-M-A3	using mathematics and appropriate tools and techniques to gather, analyze, and interpret data
SI-M-A8	utilizing safety procedures during scientific investigations
SI-M-B1	recognizing that different kinds of questions guide different kinds of scientific investigations
SI-M-B2	communicating that current scientific knowledge guides scientific investigations
SI-M-B3	understanding that mathematics, technology, and scientific techniques used in an experiment can limit or enhance the accuracy of scientific knowledge

### Specifically, students may be required to:

- construct knowledge and explanations
- formulate testable questions
- design plausible means of gathering data or evidence related to their questions
- design and carry out scientific investigations
- use appropriate tools, technology, and techniques
- gather data to address the questions they formulated
- recognize the variety of types of information that constitute evidence
- recognize the inherent bias and limitations of each source of information
- keep clear, concise records of appropriate data and observations

## Dimension 2: Interpreting and Communicating

### Benchmarks Assessed

SI-M-A4	developing descriptions, explanations, and graphs using data
SI-M-A5	developing models and predictions using the relationships between data and explanations
SI-M-A6	comparing alternative explanations and predictions
SI-M-A7	communicating scientific procedures, information, and explanations
SI-M-B4	using data and logical arguments to propose, modify, or elaborate on principles and models
SI-M-B5	understanding that scientific knowledge is enhanced through peer review, alternative explanations, and constructive criticism
SI-M-B6	communicating that scientific investigations can result in new ideas, new methods or procedures, and new technologies
SI-M-B7	understanding that scientific development/technology is driven by societal needs and funding

### Specifically, students may be required to:

- think critically and logically about relationships between different pieces of evidence
- develop and modify predictions, models, and explanations
- make meaning of observations, natural phenomena and everyday occurrences
- share the results of scientific investigation through oral and written formats

### Key Concepts:

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Science as Inquiry, students must do the following:

- Identify questions that guide/design scientific investigations and can be answered by a scientific investigation.
- Determine correct evidence to support a hypothesis.
- Identify flaws in an investigation.
- Identify parts of experimental design, types of variables, and controls; sequence steps in a scientific investigation; analyze data; and justify a logical conclusion.
- Use graphs, charts, tables, models, weather maps, and topographic maps to interpret, make predictions, and solve problems.
- Identify first steps scientists take when preparing to work on an investigation.

- Identify the best way to present results of an investigation (students and scientists).
- Use mathematics to connect a data set with a model, graph, symbols, inferences, or a valid conclusion.
- Describe how technology has helped scientists collect more accurate data or affected society.
- Explain why scientists question other scientists' work.
- Identify appropriate safety procedures and tools.
- Recognize the value of communication, multiple trials, and empirical evidence in the development of conclusions and scientific theories.
- Determine the mean, median, and mode for a data set.

## Physical Science

Physical Science focuses on the study of materials and their interactions with other forms of matter and energy. Because students are constantly exposed to different forms of matter and energy in the world, there are rich opportunities to draw on concrete experiences and observations to provide the foundation for more abstract concepts and ideas.

Dimension 1: Understanding Essential Content and Concepts	
Benchmarks Assessed	
PS-M-A1	investigating, measuring, and communicating the properties of different substances that are independent of the amount of the substance
PS-M-A2	understanding that all matter is made up of particles called atoms and that atoms of different elements are different
PS-M-A3	grouping substances according to similar properties and/or behaviors
PS-M-A4	understanding that atoms and molecules are perpetually in motion
PS-M-A7	understanding that during a chemical reaction in a closed system, the mass of the products is equal to that of the reactants
PS-M-B2	recognizing different forces and describing their effects (gravity, electrical, magnetic)
PS-M-B3	understanding that, when an object is not being subjected to a force, it will continue to move at a constant speed and in a straight line
PS-M-B5	understanding that unbalanced forces will cause changes in the speed or direction of an object's motion
PS-M-C2	understanding the different kinds of energy transformations and the fact that energy can be neither destroyed nor created
PS-M-C3	understanding that the Sun is a major source of energy and that energy arrives at Earth's surface as light with a range of wavelengths
PS-M-C7	understanding that energy is involved in chemical reactions

### Specifically, students may be required to:

- demonstrate knowledge and understanding of
  - properties of matter*
  - physical interactions of matter*
  - chemical interactions of matter*
  - the transfer of energy*
- recognize and discuss patterns of behavior among materials

## Dimension 2: Explaining, Reflecting, and Connecting

### Benchmarks Assessed

PS-M-A8	discovering and recording how factors such as temperature influence chemical reactions
PS-M-A9	identifying elements in compounds found in common foods, clothing, household materials, and automobiles
PS-M-B4	describing how forces acting on an object will reinforce or cancel one another, depending upon their direction and magnitude
PS-M-C1	identifying and comparing the characteristics of different types of energy
PS-M-C4	observing and describing the interactions of light and matter (reflection, refraction, absorption, transmission, scattering)
PS-M-C6	describing the types of energy that can be involved, converted, or released in electrical circuits

### Specifically, students may be required to:

- think critically and logically about the relationships between evidence and Physical Science concepts
- recognize the importance of and relationships between separate ideas, facts, observations, and phenomena
- recognize similarities or differences, patterns of change or constancy, and relations within systems or between form and function
- unify concepts and processes to explain natural phenomena, observations, and ideas

## Dimension 3: Applying and Using Knowledge and Technology

### Benchmarks Assessed

PS-M-A5	investigating the relationships among temperature, molecular motion, phase changes, and physical properties of matter
PS-M-A6	investigating chemical reactions between different substances to discover that new substances formed may have new physical properties and do have new chemical properties
PS-M-B1	describing and graphing the motions of objects
PS-M-C5	investigating and describing the movement of heat and the effects of heat in objects and systems
PS-M-C8	comparing the uses of different energy resources and their effects upon the environment

**Specifically, students may be required to:**

- generalize findings about Physical Science concepts
- solve contextualized problems
- apply data to new situations
- critically evaluate new ideas
- propose, analyze, and critique explanations for observed phenomena
- use technology and scientific information to investigate and solve problems
- communicate their findings and ideas

**Key Concepts:**

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Physical Science, students must do the following:

- Compare physical properties of materials (density, freezing or boiling point, solubility, malleability, conductivity, magnetism).
- Identify elements in common objects (clothing, food, tools, rocks, soil, water).
- Use the periodic table to classify or identify properties of individual or groups of elements.
- Draw a distance-time line graph indicating motions such as constant speed, acceleration, deceleration (negative acceleration).
- Recognize or describe that all matter is made up of constantly moving particles and that the state of matter depends on the energy and motion of the particles.
- Differentiate among protons, electrons, neutrons, ions, and molecules.
- Compare and contrast forces and explain the causes and effects of gravity.
- Determine or illustrate with arrows the motion of an object subjected to balanced or unbalanced forces; indicate direction and magnitude or distance.
- Describe the relationship among force, mass, and acceleration.
- Identify reactants, products, and indications (energy changes, formation of new substances) of chemical reactions and that the mass of products is the same as mass of the reactants.
- Identify how temperature, agitation, and particle size affect the rate of chemical reactions.
- Relate valence electrons to bonding and types of chemical bonds. Identify accurate bond illustrations.

- Describe how heat travels (heat transfer) in and around objects (conduction, convection, and radiation) and how it affects objects.
- Differentiate among forms and types of energy: kinetic, potential, mechanical, chemical, thermal, radiant, electrical, and magnetic.
- Analyze the motion of electricity (negative charges) in circuits and how it is transformed from and into other forms of energy.
- Describe the colors in the visible light spectrum; the effects of light traveling through a prism; refraction, absorption, transmission of light; and relate wavelengths to colors.
- Identify and compare the components of the electromagnetic spectrum; relate wavelength to sequence and energy of components.

## Life Science

Life Science focuses on the study of living organisms—structure and function, characteristics, behavior, and interaction. The concept of species survival, through natural selection and adaptation, drives the study of organisms, including their form and function, roles in an ecosystem, and evolutionary relationships to other organisms.

Dimension 1: Understanding Essential Content and Concepts	
Benchmarks Assessed	
LS-M-A1	describing the observable components and functions of a cell, such as the cell membrane, nucleus, and movement of molecules into and out of cells
LS-M-A4	describing the basic processes of photosynthesis and respiration and their importance to life
LS-M-A7	describing communicable and noncommunicable diseases
LS-M-B1	describing the importance of body cell division (mitosis) and sex cell production (meiosis)
LS-M-B2	describing the role of chromosomes and genes in heredity
LS-M-B3	describing how heredity allows parents to pass certain traits to offspring
LS-M-D1	describing the importance of plant and animal adaptation, including local examples

**Specifically, students may be required to:**

- develop an understanding of the characteristics and relationships of organisms and their environments
- develop an understanding of the principles and concepts that explain characteristics of plants and animals (for example, systems interactions, form and function, evolutionary development)

Dimension 2: Explaining, Reflecting, and Connecting	
<b>Benchmarks Assessed</b>	
LS-M-A2	comparing and contrasting the basic structures and functions of different plant and animal cells
LS-M-A5	investigating human body systems and their functions (including circulatory, digestive, skeletal, respiratory)
LS-M-A6	describing how the human body changes with age and listing factors that affect the length and quality of life
LS-M-C2	modeling and interpreting food chains and food webs
LS-M-C3	investigating major ecosystems and recognizing physical properties and organisms within each
LS-M-C4	explaining the interaction and interdependence of nonliving and living components within ecosystems
LS-M-D2	explaining how some members of a species survive under changed environmental conditions

**Specifically, students may be required to:**

- think critically and logically about the relationships between evidence and Life Science concepts
- recognize the importance of and relationships between separate ideas, facts, and phenomena
- recognize similarities or differences
- recognize patterns of change or constancy
- recognize relations within systems or between form and function
- unify concepts and processes to explain natural phenomena, observations, and ideas

## Dimension 3: Applying and Using Knowledge and Technology

### Benchmarks Assessed

LS-M-A3	observing and analyzing the growth and development of selected organisms, including a seed plant, an insect with complete metamorphosis, and an amphibian
LS-M-C1	constructing and using classification systems based on the structure of organisms

### Specifically, students may be required to:

- use scientific knowledge and understanding to generalize findings and Life Science concepts
- solve contextualized problems
- apply data to new situations
- critically evaluate new ideas
- propose, recognize, analyze, and critique explanations for observed phenomena
- use technology and scientific information to investigate and solve problems
- communicate findings and ideas

### Key Concepts:

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Life Science, students must do the following:

- Identify and compare different types of cells, their components, and the functions of each cell type and its basic organelles (plant cell, animal cell, red blood cell, white blood cell, muscle cell, skin cell).
- Describe basic needs and processes of common living cells or life (energy, transport mechanisms, elements/nutrients, reproduction).
- Recognize and describe basic plant tissues and the structures and functions of each.
- Recognize major functions, organs, and interactions of body systems (circulatory, respiratory, nervous, skeletal, muscular, digestive, urinary).
- Use structures and features of organisms for simple classification and to determine adaptations to specific habitats.
- Provide or select examples of changes over time that have allowed various species to survive or that illustrate similarities in structures of animals. Fossil evidence may be used.

- Contrast meiosis and mitosis; recognize the function of each type of cell division.
- Analyze, compare, and sequence the life cycles of a variety of organisms, including humans.
- Describe and contrast the processes (input, output, functions) of photosynthesis and aerobic respiration; determine the relationship between these two processes; write the chemical equation for each process.
- Differentiate among the structure and roles of DNA, genes, and chromosomes.
- Differentiate between genotype and phenotype and be able to predict either for simple monohybrid crosses using a Punnett square.
- Compare sexual and asexual reproduction.
- Identify conditions and habits that lead to optimal health and a prolonged life (balanced diet, exercise, immunization, etc.).
- Recognize major communicable, noncommunicable, and genetic diseases or disorders and identify causes, preventative measures, symptoms, and treatments.

## Earth and Space Science

Earth and Space Science focuses on the properties, structure, and interactions of the subsystems of Earth, the solar system, and the universe. The study of Earth and Space Science provides a rich opportunity for students to demonstrate their understanding of how concrete and observable phenomena are influenced by more abstract conditions or changes.

Dimension 1: Understanding Essential Content and Concepts	
Benchmarks Assessed	
ESS-M-A1	understanding that Earth is layered by density with an inner and outer core, a mantle, and a thin outer crust
ESS-M-A2	understanding that Earth's crust and solid upper mantle are dividing plates that move in response to convection currents (energy transfers) in the mantle
ESS-M-A5	identifying the characteristics and uses of minerals and rocks and recognizing that rocks are mixtures of minerals
ESS-M-A9	comparing and contrasting topographic features of the ocean floor to those formed above sea level
ESS-M-A11	understanding that the atmosphere interacts with the hydrosphere to affect weather and climate conditions
ESS-M-C1	identifying the characteristics of the Sun and other stars
ESS-M-C5	modeling the position of Earth in relationship to other objects in the solar system

**Specifically, students may be required to:**

- develop an understanding of:
  - the properties of Earth materials*
  - the structure of Earth's systems*
  - Earth's history*
  - Earth's place in the universe*
- demonstrate knowledge about the structure, order, and origin of the universe
- develop a basic understanding of our world

## Dimension 2: Explaining, Reflecting, and Connecting

### Benchmarks Assessed

ESS-M-A3	investigating the characteristics of earthquakes and volcanoes and identifying zones where they may occur
ESS-M-A4	investigating how soils are formed from weathered rock and decomposed organic material
ESS-M-A6	explaining the processes involved in the rock cycle
ESS-M-A7	modeling how landforms result from the interaction of constructive and destructive forces
ESS-M-A10	explaining (illustrating) how water circulates—on and through the crust, in the oceans, and in the atmosphere—in the water cycle
ESS-M-B1	investigating how fossils show the development of life over time
ESS-M-B3	understanding that the Earth processes, such as erosion and weathering, that affect Earth today are similar to those which occurred in the past
ESS-M-C2	comparing and contrasting the celestial bodies in our solar system
ESS-M-C3	investigating the force of gravity and the ways gravity governs motion in the solar system and objects on Earth
ESS-M-C4	modeling the motions of the Earth-Moon-Sun system to explain day and night, a year, eclipses, moon phases, and tides
ESS-M-C7	modeling and explaining how seasons result from variations in the amount of the Sun’s energy hitting the surface due to the tilt of Earth’s rotation on its axis and the length of the day

### Specifically, students may be required to:

- think critically and logically about the relationships between evidence and Earth and Space Science concepts
- recognize the importance of and relationships between separate ideas, facts, and phenomena
- recognize similarities or differences
- recognize patterns of change or constancy
- recognize relations within systems or between form and function
- unify concepts and processes to explain natural phenomena, observations, and ideas

## Dimension 3: Applying and Using Knowledge and Technology

### Benchmarks Assessed

ESS-M-A8	identifying man-made and natural causes of coastal erosion and the steps taken to combat it
ESS-M-A12	predicting weather patterns through use of a weather map
ESS-M-B2	devising a model that demonstrates supporting evidence that Earth has existed for a vast period of time
ESS-M-C6	modeling and describing how radiant energy from the Sun affects phenomena on the Earth's surface, such as winds, ocean currents, and the water cycle
ESS-M-C8	understanding that space exploration is an active area of scientific and technological research and development

### Specifically, students may be required to:

- use scientific knowledge and understanding to generalize findings and Earth and Space Science concepts
- solve contextualized problems
- apply data to new situations
- critically evaluate new ideas
- propose, recognize, analyze, and critique explanations for observed phenomena
- use technology and scientific information to investigate and solve problems
- communicate findings and ideas

### Key Concepts:

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Earth and Space Science, students must do the following:

- Describe the structure of the four density layers of Earth (crust, mantle, outer core, inner core).
- Identify and compare the layers of Earth's atmosphere
- Describe the components of the water cycle and recognize that it is powered by the Sun and affects weather patterns.
- Explain how unequal heating of air close to Earth's surface causes weather patterns
- Describe natural disasters, predict their effects, and classify them as constructive or destructive forces (earthquakes, hurricanes, volcanic eruptions, tsunamis, etc.).

- Identify major characteristics of stars, the Moon, meteors, planets, and the solar system.
- Compare and classify the planets of our solar system (appearance, size, type, composition, orbits, and distance from our Sun).
- Identify effects of convection currents on tectonic plates of Earth's crust and upper mantle (volcanoes, earthquakes, ocean floor spreading, mountain building, faulting, and folding).
- Identify characteristics of and classify major rocks and minerals.
- Identify characteristics of major landforms and determine the effects of constructive or destructive forces on them (mountains, valleys, river systems, plateaus, and plains).
- Use Hertzberg-Russell diagram to determine brightness and temperature of stars, including our Sun.
- Identify the relative positions of the Earth, Sun, and Moon during a solar eclipse and a lunar eclipse.
- Identify and sequence the phases of the Moon.
- Model or describe the tilt, revolution, and rotation of the Earth and recognize the positions of the Earth and Sun during each of Earth's four seasons.
- Describe the components of soil and explain the significance of the presence of organic materials and soil layers.
- Identify roles, types, and agents of weathering and erosion, including coastal erosion.
- Explain the significance of fossils and why similar fossils are found on two or more separate continents.
- Identify the motivation for and value of space exploration.
- Identify processes and data used to estimate the age of Earth.
- Describe or illustrate the rock cycle and differentiate among igneous, metamorphic, and sedimentary rock.

## Science and the Environment

Science and the Environment focuses on the interactions among the living and nonliving components of the natural world, as well as the consequences of change. The study of Science and the Environment provides an opportunity for direct investigation of cause-and-effect relationships among organisms and resources, as well as an understanding and appreciation of the unique capability of humans to have a dramatic impact on their environment.

### Dimension 1: Understanding Essential Content and Concepts

#### Benchmarks Assessed

SE-M-A1	demonstrating knowledge that an ecosystem includes living and nonliving factors and that humans are an integral part of ecosystems
SE-M-A6	distinguishing between renewable and nonrenewable resources and understanding that nonrenewable natural resources are not replenished through the natural cycles and thus are strictly limited in quantity
SE-M-A7	demonstrating knowledge of the natural cycles, such as the carbon cycle, nitrogen cycle, water cycle, and oxygen cycle

#### Specifically, students may be required to:

- demonstrate knowledge about the interrelationships among the biological, chemical, geological, and physical aspects of the environment

### Dimension 2: Explaining, Reflecting, and Connecting

#### Benchmarks Assessed

SE-M-A2	demonstrating an understanding of how carrying capacity and limiting factors affect plant and animal populations
SE-M-A5	tracing the flow of energy through an ecosystem and demonstrating a knowledge of the roles of producers, consumers, and decomposers in the ecosystem
SE-M-A9	demonstrating relationships of characteristics of soil types to agricultural practices and productivity

#### Specifically, students may be required to:

- think critically and logically about the relationships between evidence and Environmental Science concepts

- recognize the importance of and relationships between separate ideas, facts, and phenomena
- recognize similarities or differences
- recognize patterns of change or constancy
- recognize relations within systems or between form and function
- unify concepts and processes to explain natural phenomena, observations, and ideas

### Dimension 3: Applying and Using Knowledge and Technology

#### Benchmark Assessed

SE-M-A3	defining the concept of pollutant and describing the effects of various pollutants on ecosystems
SE-M-A4	understanding that human actions can create risks and consequences in the environment
SE-M-A8	investigating and analyzing how technology affects the physical, chemical, and biological factors in an ecosystem
SE-M-A10	identifying types of soil erosion and preventive measures

#### Specifically, students may be required to:

- use scientific knowledge and understanding to generalize findings and Environmental Science concepts
- solve contextualized problems
- apply data to new situations
- critically evaluate new ideas
- propose, recognize, analyze, and critique explanations for observed phenomena
- use technology and scientific information to investigate and solve problems
- communicate findings and ideas

#### Key Concepts:

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Science and the Environment, students must do the following:

- Analyze and identify the impact of human activities and technology on populations, habitats, and Earth systems.

- Identify and compare the major biomes found on Earth.
- Identify the Sun as the ultimate source of energy to power ecosystems and trace the energy flow in ecosystems using food webs, chains, or pyramids.
- Differentiate among and sequence levels of organization in the biosphere from specific to general (atoms, molecules, organelles, cells, tissues, organs, systems, organisms, populations, communities, ecosystems, biomes, and biosphere).
- Compare and differentiate between niche and habitat.
- Predict the effects that habitat destruction, the introduction of a nonnative species, or the loss of an organism have on an ecosystem or other species.
- Identify relationships and interactions among producers, consumers, decomposers, scavengers, herbivores, and carnivores and identify forms of symbiosis: mutualism, parasitism, and commensalism.
- Identify effective measures for the prevention of soil and coastal erosion.
- Describe carrying capacity, limiting factors, and sustainability, and their relationships to changes in habitat and populations.
- Differentiate between renewable and nonrenewable natural resources.
- Identify major sources of pollution, describe their likely effects, and classify them as point or nonpoint sources.
- Interpret, illustrate, or describe natural cycles, such as the carbon and nitrogen cycles.

## Sample Test Items: Grade 8 Science

### Sample Science Multiple-Choice Items

Items 1 through 24 are sample multiple-choice items, arranged by strand and benchmark. Some items may assess all of the skills of a benchmark, while other items may measure only a portion of the skills of the benchmark.

#### Science as Inquiry

**Benchmark SI-M-A5:** developing models and predictions using the relationships between data and explanations

**Use the information in the box below to answer question 1.**

Pierre wants to build a model of a ramp that would be safe for students who use wheelchairs. He knows that to be safe, a wheelchair ramp should not drop more than 10 centimeters for every 120 centimeters of ramp length. Pierre has the following materials:

- a ball that will roll the way a wheelchair rolls
- a stopwatch to time the ball as it rolls
- a board that can be used as a small ramp
- blocks of wood to prop up the board at different heights
- a meterstick to measure distance

1. Which items are necessary for Pierre to build a correct model of the ramp?
  - A. the stopwatch and the ball only
  - B. the meterstick and the board only
  - C. the meterstick, the board, and the blocks of wood only
  - D. the board, the blocks of wood, and the ball only

**Correct response: C**

## Science as Inquiry

**Benchmark SI-M-A6:** comparing alternative explanations and predictions

**Use the information and the table below to answer question 2.**

Corey found that when he added a certain chemical to water, the water would heat up. He then performed an experiment in which he mixed different amounts of the chemical with water in a test tube and measured the temperature of the water. The results of his experiment are shown in the table below.

Trial	Amount of Water	Amount of Chemical	Temperature of Water before Adding Chemical	Temperature of Water 2 minutes after Adding Chemical
1	100 mL	0 grams	21°C	21°C
2	100 mL	5 grams	21°C	27°C
3	100 mL	10 grams	21°C	32°C
4	100 mL	15 grams	21°C	35°C
5	100 mL	20 grams	21°C	35°C

2. Which of these is a valid conclusion based on the results of Corey's experiment?

- A. Adding more of the chemical will always heat the water to a greater temperature.
- B. The chemical always heats water to the same temperature.
- C. The temperature of water is not affected by the amount of the chemical.
- D. Adding more of the chemical will heat the water but only up to a certain temperature.

**Correct response: D**

## Science as Inquiry

**Benchmark SI-M-B4:** using data and logical arguments to propose, modify, or elaborate on principles and models

**Use the information and table below to answer question 3.**

Plot Number	Daily Amount of Water per Plant	Average Final Height
1	1 liter	122 centimeters
2	2 liters	155 centimeters
3	3 liters	190 centimeters
4	4 liters	216 centimeters
5	5 liters	206 centimeters
6	6 liters	168 centimeters

Mabel read that regular heavy watering promotes growth in sunflower plants. She planted 6 plots of sunflowers with 5 plants each and watered each plot with a different amount of water. The table shows her results.

3. Which of these statements represents Mabel's revised understanding of sunflower growth?

- A. Heavy watering on a regular schedule promotes sunflower growth.
- B. Some plants respond better to watering, while others respond better to light.
- C. Water promotes growth up to a point, beyond which it stunts growth.
- D. Some sunflower plants need less water than others.

**Correct response: C**

## **Physical Science**

**Benchmark PS-M-A1:** investigating, measuring, and communicating the properties of different substances that are independent of the amount of the substance

4. Joyce put 200 milliliters of water in a beaker, put a thermometer in it, and heated it until it started to boil. She recorded a temperature of 100°C when it started to boil. She repeated the process with 400 milliliters of water. What would be the temperature when this second sample started to boil?

- A. twice as high as the first sample's
- B. slightly higher than the first sample's
- C. half as high as the first sample's
- D. the same as the first sample's

**Correct response: D**

## **Physical Science**

**Benchmark PS-M-A5:** investigating the relationships among temperature, molecular motion, phase changes, and physical properties of matter

5. Jo Anne took a large beaker of clean water and carefully added one drop of blue food coloring to the edge of the water's surface. She did not touch or move the beaker. At first, she saw blue streaks as the food coloring sank into the water, but gradually the color of the entire beaker of water became evenly blue. What caused the blue food coloring to be mixed throughout the water?

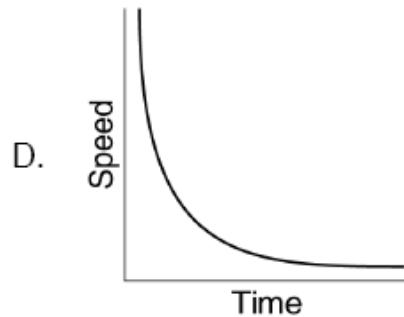
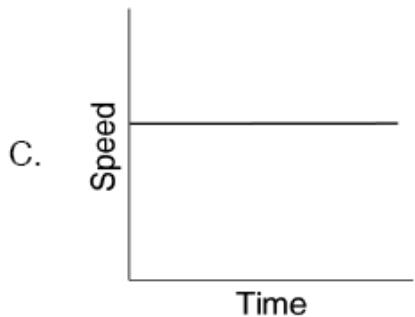
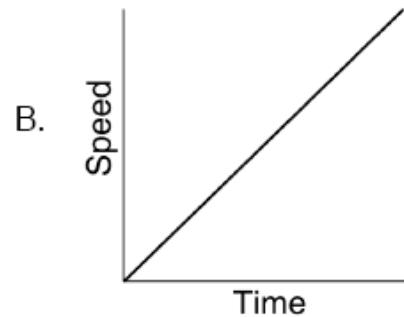
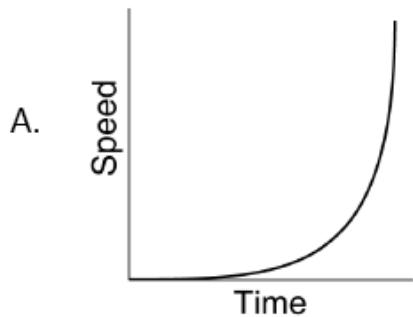
- A. Water molecules hitting the food coloring molecules caused the mixing.
- B. Light shining on the surface of the water caused the mixing.
- C. A chemical reaction between the water and the food coloring formed a new, light blue compound.
- D. The water interacted with the food coloring, causing the blue color to fade.

**Correct response: A**

## Physical Science

### Benchmark PS-M-B1: describing and graphing the motions of objects

6. A force acting on an object that is free to move will cause a change in the speed of the object. Which graph shows how the speed of an object would change if a single constant force were applied to the object over a period of time?



**Correct response: B**

## Physical Science

**Benchmark PS-M-B5:** Understanding that unbalanced forces will cause changes in the speed or direction of an object's motion

7. Jerry threw a ball into the air. It followed a curved path and soon fell to the ground because

- air friction stopped the ball.
- gravity changed the ball's direction.
- the ball was not thrown hard enough.
- the ball was not thrown straight up.

**Correct response: B**

## Physical Science

**Benchmark PS-M-C3:** understanding that the Sun is a major source of energy and that energy arrives at Earth's surface as light with a range of wavelengths

8. The radiant energy that comes to Earth from the Sun is

- only one wavelength that we see as yellow.
- a narrow band of wavelengths that is entirely visible light.
- mostly long wavelengths that become heat energy.
- a range of many wavelengths from long to very short.

**Correct response: D**

## Physical Science

**Benchmark PS-M-C3:** understanding that the Sun is a major source of energy and that energy arrives at Earth's surface as light with a range of wavelengths

9. Denise was driving east over a hill in the afternoon, shortly after a rain shower. Suddenly the sun broke through the clouds, and she saw a rainbow ahead of her. Which of the following made the rainbow possible?

- Sunlight can be separated into all the colors of the rainbow.
- Water reflects sunlight like a mirror to make it look colored.
- Overhead black clouds reflect in puddles to cause a mirage.
- Air pollution causes the sky to look colored under these conditions.

**Correct response: A**

## Life Science

**Benchmark LS-M-A2:** comparing and contrasting the basic structures and functions of different plant and animal cells

10. Which statement about plant and animal cells is true?

- A. Both have a cell wall to give them support.
- B. Both have a large vacuole to store water.
- C. Both use mitochondria to produce energy.
- D. Both use chloroplasts to store energy.

**Correct response: C**

## Life Science

**Benchmark LS-M-A2:** comparing and contrasting the basic structures and functions of different plant and animal cells

11. The process of cellular respiration occurs in

- A. both plant and animal cells.
- B. plant cells only.
- C. animal cells only.
- D. neither plant nor animal cells.

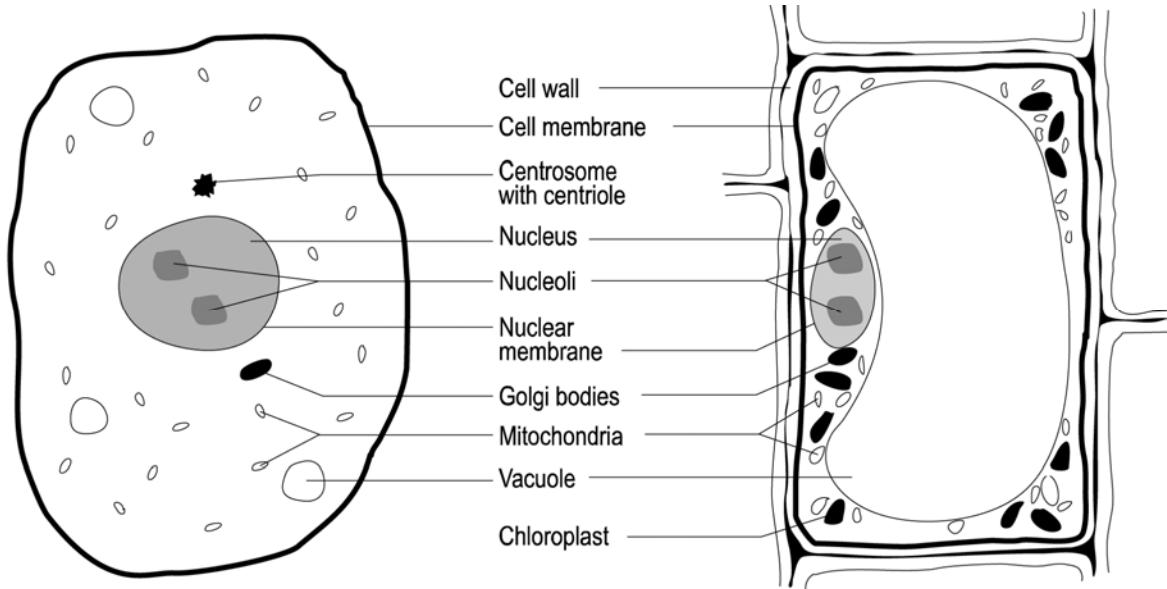
**Correct response: A**

## Life Science

**Benchmark LS-M-A2:** comparing and contrasting the basic structures and functions of different plant and animal cells

**Use the diagrams below of an animal cell and a plant cell to answer question**

**12.**



**12.** Features of plant cells that clearly make them different from animal cells are

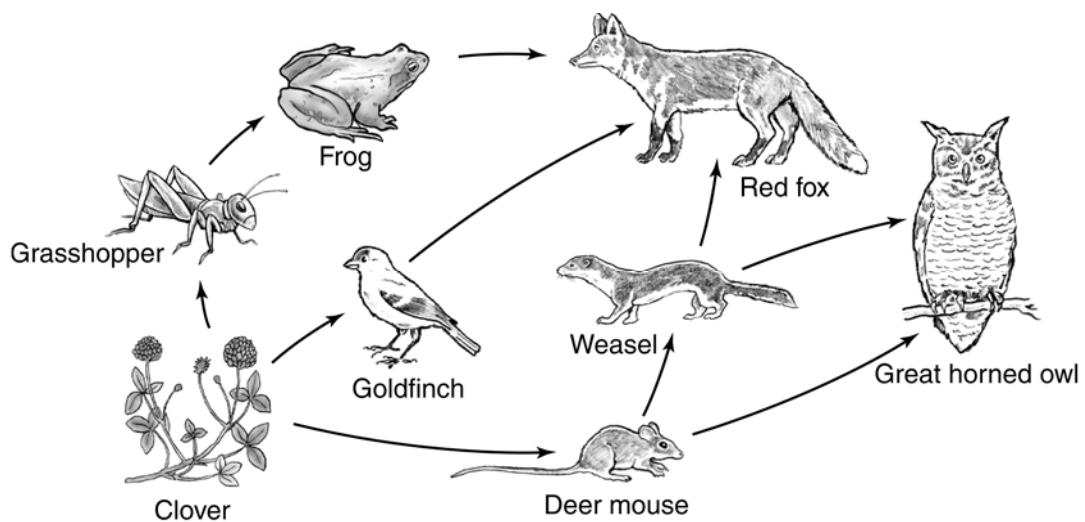
- a larger nucleus and fewer chromosomes.
- a rigid cell wall and chloroplasts.
- more cytoplasm and smaller vacuoles.
- a changing size and indefinite shape.

**Correct response: B**

## Life Science

**Benchmark LS-M-C2:** modeling and interpreting food chains and food webs

Use the food web below to answer question 13.



13. Which of these are not represented in the food web?

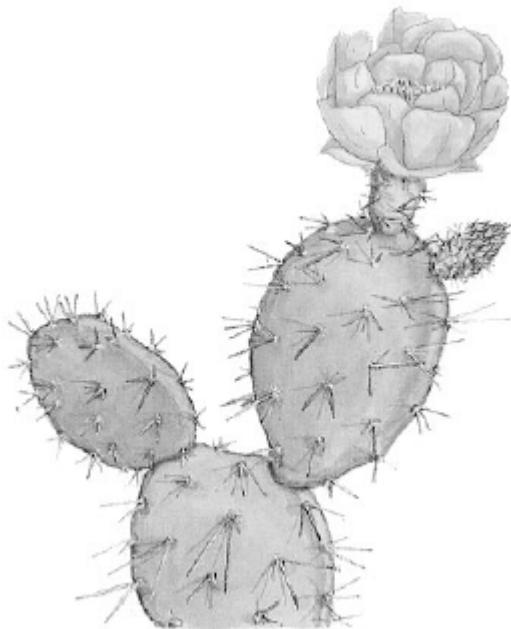
- A. producer
- B. primary consumers
- C. secondary consumers
- D. decomposers

**Correct response: D**

## Life Science

**Benchmark LS-M-C3:** investigating major ecosystems and recognizing physical properties and organisms within each

**Use the picture below to answer question 14.**



The cactus plant shown above lives in a desert environment.

**14.** Which characteristic of this plant could be found in many other desert plants?

- A. a deep root system for gathering water
- B. lush growth that serves to trap water if it rains
- C. broad leaves that protect the plants from the hot sun
- D. leaves and stems that are adapted to conserve water

**Correct response: D**

## Life Science

**Benchmark LS-M-D2:** explaining how some members of a species survive under changed environmental conditions

15. Over a long period, some flowering plants have become dependent on honeybees to fertilize their eggs. In recent years, a form of mite has infected and killed the honeybees in many areas of the country. Since this has happened, the once bee-dependent plants with the best chance of surviving are those that

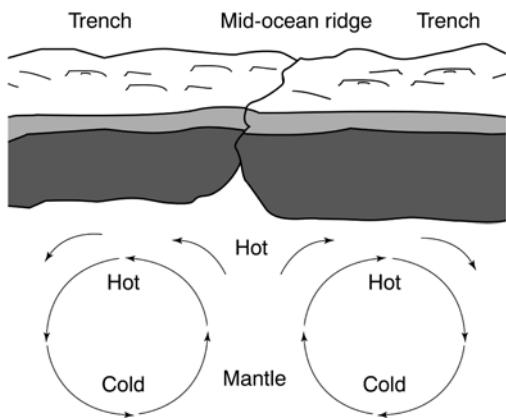
- A. grow taller so that the few remaining honeybees will find them.
- B. change their flowers so that wind will fertilize them.
- C. have always attracted many other insects as well as honeybees.
- D. have seeds that stay alive for a long time in the environment.

**Correct response: C**

## Earth and Space Science

**Benchmark ESS-M-A2:** understanding that Earth's crust and solid upper mantle are dividing plates that move in response to convection currents (energy transfers) in the mantle

**Use the diagram below to answer question 16.**



16. Based on the diagram, which process explains why less dense, hot magma rises to the surface to displace more dense, cooler magma?

- A. conduction
- B. diffusion
- C. radiation
- D. convection

**Correct response: D**

## **Earth and Space Science**

**Benchmark ESS-M-A6:** explaining the processes involved in the rock cycle

**17.** Which statement is the best description of what happens in the rock cycle?

- A. Rocks on old mountains are gradually weathered away, while mountain building and volcanism form new mountains.
- B. Once formed, rocks stay in place until rocks above them are weathered away and they reach the surface.
- C. As sedimentary rocks are buried deep below other rocks, they are changed by heat and pressure, eventually return to the surface, and are weathered again.
- D. Younger sedimentary rocks are always deposited on top of older metamorphic or igneous rocks.

**Correct response:** C

## **Earth and Space Science**

**Benchmark ESS-M-A7:** modeling how landforms result from the interaction of constructive and destructive forces

**18.** El Cajon Pass in California is becoming higher than the land around it at a rate of nearly 1 centimeter each year. Which statement is true about the area?

- A. Erosion is slower than uplift at El Cajon Pass.
- B. Plates are separating at El Cajon Pass.
- C. Mountain building is slower than erosion at El Cajon Pass.
- D. Erosion and uplift are balanced at El Cajon Pass.

**Correct response:** A

## **Earth and Space Science**

**Benchmark ESS-M-C3:** investigating the force of gravity and the ways gravity governs motion in the solar system and objects on Earth

**19.** When people walked on the Moon, they found that they could jump higher than they could back on Earth. Why is this true?

- A. There is no atmosphere on the Moon.
- B. The Moon exerts less gravitational force than Earth.
- C. Space suits helped them jump higher.
- D. The Moon rotates faster than Earth does.

**Correct response: B**

## **Science and the Environment**

**Benchmark SE-M-A3:** defining the concept of pollutant and describing the effects of various pollutants on ecosystems

**20.** Which activity is **most likely** to add pollutants to the environment?

- A. watering a garden
- B. pulling weeds from a lawn
- C. installing a wooden fence
- D. burning leaves

**Correct response: D**

## **Science and the Environment**

**Benchmark SE-M-A3:** defining the concept of pollutant and describing the effects of various pollutants on ecosystems

**21.** Which of these **best** defines the term *pollutant*?

- A. anything humans add to the atmosphere and oceans
- B. any substance that is harmful to the environment
- C. any substance that is a waste product of industry
- D. a substance that does not break down over time

**Correct response: B**

## Science and the Environment

**Benchmark SE-M-A4:** understanding that human actions can create risks and consequences in the environment

22. Many scientists accept the theory that excess emission of carbon dioxide from cars and industry causes a layer of gas in the upper atmosphere that traps heat. This in turn causes the average temperature on Earth to rise. Which of the following observations supports that theory?

- A. The summer of 1998 was one of the hottest summer seasons on record.
- B. Carbon dioxide gas from cars and industry is a product of burning that produces heat.
- C. Carbon dioxide in the upper atmosphere reflects heat radiated from Earth's surface.
- D. Radiation on Earth's surface is increasing because of a hole in the ozone layers.

**Correct response:** C

## Science and the Environment

**Benchmark SE-M-A5:** tracing the flow of energy through an ecosystem and demonstrating a knowledge of the roles of producers, consumers, and decomposers in the ecosystem

23. In an ecosystem, which list of organisms is in the correct order from producer to top-level consumer?

- A. field mouse, grass, hawk, snake
- B. snake, field mouse, hawk, grass
- C. grass, field mouse, snake, hawk
- D. snake, grass, field mouse, hawk

**Correct response:** C

## Science and the Environment

**Benchmark SE-M-A7:** demonstrating knowledge of the natural cycles, such as the carbon cycle, nitrogen cycle, water cycle, and oxygen cycle

24. In the oxygen cycle, which group of organisms replenishes a large portion of the atmospheric oxygen supply?

- A. mammals
- B. fungi
- C. insects
- D. plants

**Correct response: D**

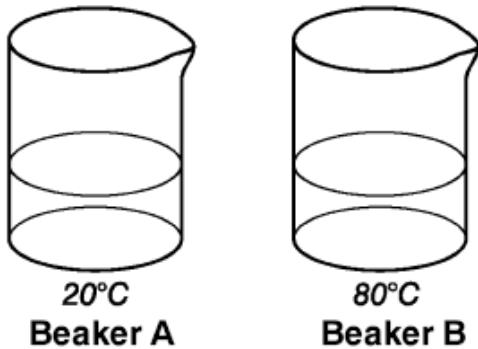
## Sample Science Short-Answer Items

Items 25 through 30 show sample short-answer items. Each item involves several steps and the application of multiple skills. Each short-answer item is designed to assess one of the benchmarks. The items are scored using an item-specific rubric on a scale of 0 to 2 points.

### Physical Science

**Benchmark PS-M-A5:** investigating the relationships among temperature, molecular motion, phase changes, and physical properties of matter

**Use the diagram below to answer question 25.**



25. Two beakers were prepared with 150 milliliters of water at two different temperatures, as shown above. Two drops of food coloring were then added carefully at the surface of each beaker of water. In which beaker would the food coloring spread faster through the entire beaker? Explain your answer.

#### Scoring Rubric:

Score	Description
2	The student chooses beaker B <b>AND</b> gives a correct and clear explanation of why that is the correct choice. A clear explanation would mention diffusion or the hotter temperature in beaker B. There are no errors.
1	The student chooses beaker B but is wrong or unclear about the explanation or offers no explanation <b>OR</b> chooses beaker A but shows some understanding in defending the choice or has some concept of diffusion.
0	The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

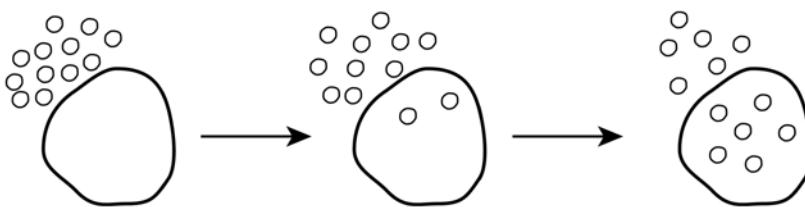
#### Scoring Notes:

The food coloring would spread, or diffuse, faster in the beaker with the hottest water. This is because the molecules of water that would collide with and cause movement of the food coloring molecules would have more energy and be moving faster through the volume of water.

## Life Science

**Benchmark LS-M-A1:** describing the observable components and functions of a cell, such as the cell membrane, nucleus, and movement of molecules into and out of cells

26. The diagram below shows water molecules moving through the cell membrane into a body cell.



A. What is the name of the process?

B. Explain what causes the molecules to move into the cell.

### Scoring Rubric:

Score	Description
2	The student names the process <b>AND</b> explains what causes the molecules to move into the cell. Response contains no errors.
1	The student names the process or explains what causes the molecules to move into the cell <b>OR</b> the student completes parts A and B with minor errors.
0	The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

### Scoring Notes:

*Part A:* osmosis, diffusion, passive transport

*Part B:* Initially, there is a higher concentration of water molecules outside the cell, which creates a concentration gradient (difference in concentration). To achieve equilibrium, water molecules flow into the cell. This can also be expressed as the molecules spreading themselves equally/going where there are fewer of the same molecules. Also acceptable is that the molecules try to even out between the inside and outside of the cell.

## Life Science

**Benchmark LS-M-B3:** describing how heredity allows parents to pass certain traits to offspring

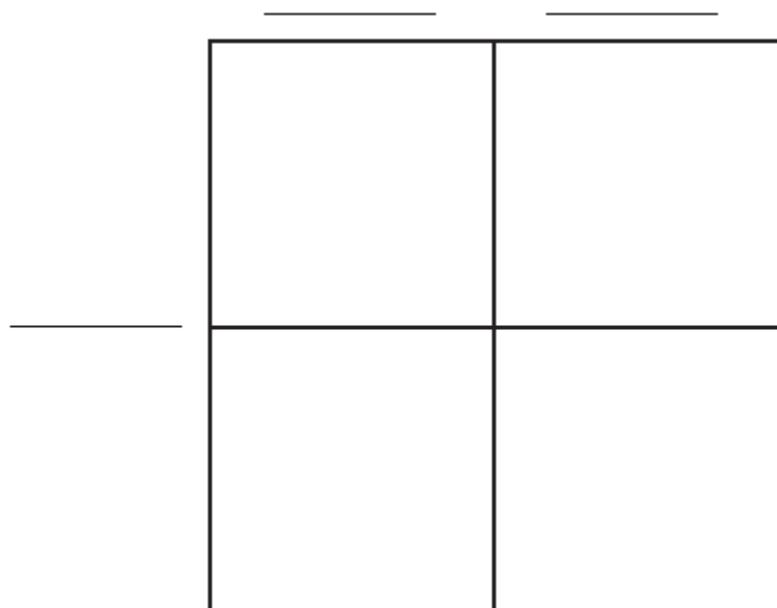
27. The ability to roll the tongue is a dominant trait, designated by R. The inability to roll the tongue is a recessive trait designated by r.

Kathy's mother has a genotype of RR, and her father cannot roll his tongue.

A. What is her father's genotype?

B. What is the probability that Kathy will be able to roll her tongue?

You may use the Punnett square to help you find your answer.



**Scoring Rubric:**

Score	Description
<b>2</b>	The student correctly identifies the father's genotype and the probability that Kathy will be able to roll her tongue. Response contains no errors.
<b>1</b>	The student correctly identifies the father's genotype or the probability that Kathy will be able to roll her tongue.
<b>0</b>	The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

**Scoring Notes:**

*Part A:* The father's genotype would be rr. (Note that it is not OK to substitute other letters.) This genotype may be pulled from the Punnett square if necessary.

*Part B:* There is a 100 percent likelihood that Kathy will be able to roll her tongue (probability = 1, 4/4 ).

**Additional Information:** The Punnett square is only a tool for students and IS NOT TO BE SCORED.

	r	r
R	Rr	Rr
R	Rr	Rr

## Earth and Space Science

**Benchmark ESS-M-A1:** understanding that Earth is layered by density with an inner and outer core, a mantle, and a thin outer crust

**28.** The outer layers of Earth are the crust and the mantle.

- A.** Describe the difference between the density of the crust and of the mantle.
- B.** Describe the difference between the thickness of the crust and of the mantle.

### Scoring Rubric:

Score	Description
<b>2</b>	The student correctly describes the differences in density and thickness between the crust and mantle. Response contains no errors.
<b>1</b>	The student describes the difference in either density <b>or</b> thickness between the crust and mantle. Response may contain errors <b>OR</b> The student correctly describes both differences but includes explanations that contain errors.
<b>0</b>	The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

### Scoring Notes:

*Part A:* The crust is less dense than the mantle (density increases from outermost to innermost layer of Earth).

*Part B:* The crust is a very thin layer, while the mantle is very thick (the thickest layer, in fact).

## Earth and Space Science

**Benchmark ESS-M-C2:** comparing and contrasting the celestial bodies in our solar system

**29.** There are many differences between the planets, even though they are all part of the same solar system. For example, Earth and Jupiter are very different. Describe **two** ways Earth is different from Jupiter.

### Scoring Rubric:

Score	Description
<b>2</b>	The student correctly identifies two major differences in the two planets. Both planets need to be identified. If both planets are names in one of the parts and only one is mentioned in the other part, it can be counted as correct. Response contains no errors.
<b>1</b>	The student identifies one difference or attempts two difference but make errors or omissions. <b>or</b> The student identifies two differences are mentioned but the planets are not identified.
<b>0</b>	The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

### Scoring Notes:

The major differences are: Earth is rocky; Jupiter is gaseous (Earth is more dense than Jupiter). Earth has one moon; Jupiter has sixteen. An Earth day is 24 hours; a Jupiter day is 9.9 hours. Earth revolves around the sun in one year; Jupiter revolves around the sun in twelve years. Jupiter has rings; Earth does not. Earth has life; Jupiter does not. Jupiter's mass is 314 times the mass of Earth. There are other specific differences that might be given (Jupiter has a giant red spot, etc.). Students should be given credit for comparisons without specific quantitative values.

## Science and the Environment

**Benchmark SE-M-A4:** understanding that human actions can create risks and consequences in the environment

30. Suzanne helped her dad change the motor oil in his car. Suzanne poured the old motor oil onto the grass by the fence. Describe **two** ways this could eventually affect the water supply.

### Scoring Rubric:

Score	Description
2	The student describes two key ways Suzanne's action could affect the water supply. Response contains no errors.
1	The student describes one key way Suzanne's action could affect the water supply.
0	The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

### Scoring Notes:

The motor oil could enter the soil, then enter the groundwater (by rain, moisture leaking through the landfill liner, etc.). The water could run off from the surface, carrying the oil into rivers, lakes, or streams. Either way, groundwater and runoff water flows into the rivers, lakes, bayous, and coastal waters.

No credit is to be given for the oil clogging pipes.

## Sample Science Task

Items 31 through 34 show a sample science task, which includes 3 inquiry-based short-answer questions and 1 extended constructed-response question. Each item may involve separate steps and the application of multiple skills. The constructed-response items are designed to assess one benchmark. The short-answer items are scored using an item-specific rubric on a scale of 0 to 2 points. The extended constructed-response item is scored using an item-specific rubric on a scale of 0 to 4 points.

### Session 3: Science Task

#### TASK DESCRIPTION: Heat Conduction

When heat moves quickly through a material, the material is said to be a good conductor. When heat moves slowly through a material, the material is called a good insulator. The students in an eighth-grade class were studying how well different materials conduct heat.

They used the following procedure:

1. Students were given three cylinders of equal size and thickness. One was copper, one glass, and one Styrofoam.
2. An equal amount of room-temperature water was measured into each cylinder.
3. The cylinders were sealed with large corks.
4. Thermometers were inserted through holes in the corks.
5. The cylinders were placed in a hot-water bath with a starting temperature of 65°C (about the same as a hot drink).
6. Five minutes later, the students read the temperature of the water in each cylinder. Their results are recorded in Table A, below.

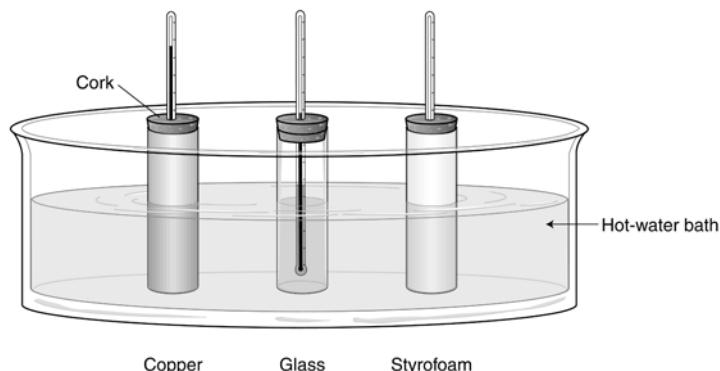
**TABLE A**  
**Class's Results**

Cylinder Material	Initial Temperature	Temperature after 5 minutes
Copper	22°C	58°C
Glass	22°C	48°C
Styrofoam	22°C	27°C

## Science as Inquiry

**Benchmark SI-M-A5:** developing models and predictions using the relationships between data and explanations

31. Their experimental design is shown in the picture below.



A. According to the results in table A, which of these materials is the best conductor of heat?

B. How do you know?

### Scoring Rubric:

Score	Description
2	The student lists two key elements. There are no errors.
1	The student lists one key element.
0	The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

### Scoring Notes:

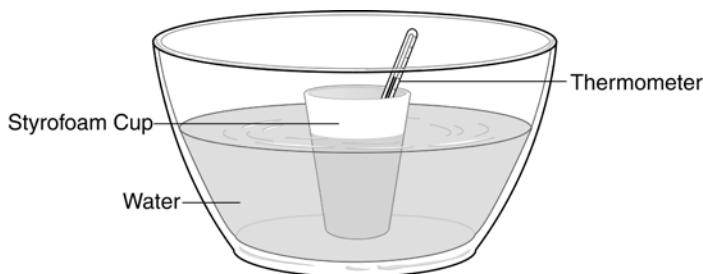
*Part A:* copper

*Part B:* The water in the copper cylinder heated up faster.

## Science as Inquiry

**Benchmark SI-M-A2:** designing and conducting a scientific investigation

**Use the picture and the table below to answer question 32.**



Cup Material	Initial Temperature	Temperature after 5 minutes
Styrofoam	22°C	25°C

Roy repeated the experiment at home using a Styrofoam cup, but his results differed from those obtained in class. His experimental set-up and his results are shown above.

**32.** Describe **two** things that could have caused Roy's result to differ from those of the class.

### Scoring Rubric:

Score	Description
<b>2</b>	The student describes two differences. There are no errors.
<b>1</b>	The student lists one difference.
<b>0</b>	The student lists one or two things without descriptors. <b>OR</b> The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

**Scoring Notes:**

- Shape of containers was not the same.
- Cup was not the same thickness as containers used in class.
- Thermometer was inserted differently.
- No cork was used.
- Water level in the cup was not the same (too high/too low).

**Science as Inquiry**

**Benchmark SI-M-A4:** developing descriptions, explanations, and graphs using data

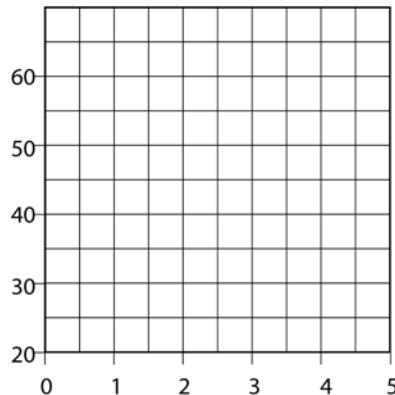
**Use the information and the table below to answer question 33.**

One of the students wanted to see how temperature changed with time inside the cylinders. He recorded the temperature inside the glass cylinder every minute for five minutes. His results are shown in the table below.

**Temperature Change Inside  
the Glass Cylinder**

Time (minutes)	Temperature (°C)
0	22
1	32
2	40
3	44
4	46
5	48

33. Use the grid below to create a line graph showing the results noted in the table above. First, label the axes, and plot the six points. Then connect the points to show how temperature changed with time.



**Scoring Rubric:**

Score	Description
<b>2</b>	The student's graph includes axes labeled correctly and at least 6 points accurately plotted within range and connected.
<b>1</b>	The student's graph includes axes labeled correctly and only 5 points plotted correctly connected or not. <b>OR</b> The student's graph is labeled correctly with at least 3 points plotted within range and connected. <b>OR</b> The student's graph is labeled Temperature and Time with at least 5 points plotted within range and connected.
<b>0</b>	The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

**Scoring Notes:**

- Correct labels are Temperature (°C) and Time (minutes) or °C and Minutes.
- Bar graph is not acceptable.
- Switching labels is not acceptable.
- Labeling the axes X and Y is not acceptable.

## Physical Science

**Benchmark PS-M-C5:** investigating and describing the movement of heat and the effects of heat in objects and systems

34. There are three ways heat is transferred. One of them is *conduction*. This is how heat moved through the cylinder walls in this experiment. Name and describe the **two other** types of heat transfer.

### Scoring Rubric:

Score	Description
4	The student names the two forms of heat transfer and defines each clearly and completely or gives clear examples of each form. There are no errors.
3	The student names the two forms of heat transfer and clearly defines one of them. <b>OR</b> The student names two forms of heat transfer and gives an example of one of them. <b>OR</b> The student names the two forms of heat transfer and attempts a description or example of both that is not clear or complete.
2	The student gives two forms of heat transfer. <b>OR</b> The student gives one form of heat transfer and clearly defines it, <b>OR</b> The student gives two clear definitions without naming the forms of heat transfer. There are no more than two errors.
1	The student names or defines one form of heat transfer with more than two errors.
0	The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.

### Scoring Notes:

1 point each for naming convection and radiation, and 1 point each for the correct description.

- Convection. *Description:* Heat that moves through a material by actual movement of the material **or** circular heat flow in a fluid (gas or liquid).
- Radiation or radiant energy. *Description:* Heat that is transmitted through space and is not carried by matter **or** Heat radiation is called infrared radiation (describing radiation).

**Additional Information:**

- Heat moves from matter at a higher temperature to matter at a lower temperature.
- Convection currents are the movements of the material (fluid) such as breezes or air circulation in a heated room or over warm bodies of water or material in Earth's mantle.
- Infrared and X-rays are electromagnetic waves.

## Benchmark Statements, across Grades

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p><b>SCIENCE AS INQUIRY</b></p> <p>In grades K–4, what students know and are able to do includes:</p> <p><b>A. THE ABILITIES NECESSARY TO DO SCIENTIFIC INQUIRY</b></p> <p>SI-E-A1 asking appropriate questions about organisms and events in the environment</p> <p>SI-E-A2 planning and/or designing and conducting a scientific investigation</p> <p>SI-E-A3 communicating that observations are made with one's senses</p> <p>SI-E-A4 employing equipment and tools to gather data and extend the sensory observations</p> <p>SI-E-A5 using data, including numbers and graphs, to explain observations and experiments</p> <p>SI-E-A6 communicating observations and experiments in oral and written formats</p> <p>SI-E-A7 utilizing safety procedures during experiments</p>	<p><b>SCIENCE AS INQUIRY</b></p> <p>As students in grades 5–8 extend their knowledge, what they know and are able to do includes:</p> <p><b>A. THE ABILITIES NECESSARY TO DO SCIENTIFIC INQUIRY</b></p> <p>SI-M-A1 identifying questions that can be used to design a scientific investigation</p> <p>SI-M-A2 designing and conducting a scientific investigation</p> <p>SI-M-A3 using mathematics and appropriate tools and techniques to gather, analyze, and interpret data</p> <p>SI-M-A4 developing descriptions, explanations, and graphs using data</p> <p>SI-M-A5 developing models and predictions using the relationships between data and explanations</p> <p>SI-M-A6 comparing alternative explanations and predictions</p> <p>SI-M-A7 communicating scientific procedures, information, and explanations</p> <p>SI-M-A8 utilizing safety procedures during scientific investigations</p>	<p><b>SCIENCE AS INQUIRY</b></p> <p>As students in grades 9–12 extend and refine their knowledge, what they know and are able to do includes:</p> <p><b>A. THE ABILITIES NECESSARY TO DO SCIENTIFIC INQUIRY</b></p> <p>SI-H-A1 identifying questions and concepts that guide scientific investigations</p> <p>SI-H-A2 designing and conducting scientific investigations</p> <p>SI-H-A3 using technology and mathematics to improve investigations and communications</p> <p>SI-H-A4 formulating and revising scientific explanations and models using logic and evidence</p> <p>SI-H-A5 recognizing and analyzing alternative explanations and models</p> <p>SI-H-A6 communicating and defending a scientific argument</p> <p>SI-H-A7 utilizing science safety procedures during scientific investigations</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p><b>B. UNDERSTANDING SCIENTIFIC INQUIRY</b></p> <p>SI-E-B1 categorizing questions into what is known, what is not known, and what questions need to be explained</p> <p>SI-E-B2 using appropriate experiments depending on the questions to be explored</p> <p>SI-E-B3 choosing appropriate equipment and tools to conduct an experiment</p> <p>SI-E-B4 developing explanations by using observations and experiments</p> <p>SI-E-B5 presenting the results of experiments</p> <p>SI-E-B6 reviewing and asking questions about the results of investigations</p>	<p><b>B. UNDERSTANDING SCIENTIFIC INQUIRY</b></p> <p>SI-M-B1 recognizing that different kinds of questions guide different kinds of scientific investigations</p> <p>SI-M-B2 communicating that current scientific knowledge guides scientific investigations</p> <p>SI-M-B3 understanding that mathematics, technology, and scientific techniques used in an experiment can limit or enhance the accuracy of scientific knowledge</p> <p>SI-M-B4 using data and logical arguments to propose, modify, or elaborate on principles and models</p> <p>SI-M-B5 understanding that scientific knowledge is enhanced through peer review, alternative explanations, and constructive criticism</p> <p>SI-M-B6 communicating that scientific investigations can result in new ideas, new methods or procedures, and new technologies</p> <p>SI-M-B7 understanding that scientific development/technology is driven by societal needs and funding</p>	<p><b>B. UNDERSTANDING SCIENTIFIC INQUIRY</b></p> <p>SI-H-B1 communicating that scientists usually base their investigations on existing models, explanations, and theories</p> <p>SI-H-B2 communicating that scientists conduct investigations for a variety of reasons, such as exploration of new areas, discovery of new aspects of the natural world, confirmation of prior investigations, evaluation of current theories, and comparison of models and theories</p> <p>SI-H-B3 communicating that scientists rely on technology to enhance the gathering and manipulation of data</p> <p>SI-H-B4 analyzing a proposed explanation of scientific evidence according to the following criteria: follow a logical structure, follow rules of evidence, allow for questions and modifications, and is based on historical and current scientific knowledge</p> <p>SI-H-B5 communicating that the results of scientific inquiry, new knowledge, and methods emerge from different types of investigations and public communication among scientists</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p><b>PHYSICAL SCIENCE</b></p> <p><b>A. PROPERTIES OF OBJECTS AND MATERIALS</b></p> <p>PS-E-A1 observing, describing, and classifying objects by properties (size, weight, shape, color, texture, and temperature)</p> <p>PS-E-A2 measuring properties of objects using appropriate materials, tools, and technology</p> <p>PS-E-A3 observing and describing the objects by the properties of the materials from which they are made (paper, wood, metal)</p> <p>PS-E-A4 describing the properties of the different states of matter and identifying the conditions that cause matter to change states</p> <p>PS-E-A5 creating mixtures and separating them based on differences in properties (salt, sand)</p> <p><b>B. POSITION AND MOTION OF OBJECTS</b></p> <p>PS-E-B1 observing and describing the position of an object relative to another object or the background</p> <p>PS-E-B2 exploring and recognizing that the position and motion of objects can be changed by pushing or pulling (force) over time</p>	<p><b>PHYSICAL SCIENCE</b></p> <p><b>A. PROPERTIES AND CHANGES OF PROPERTIES IN MATTER</b></p> <p>PS-M-A1 investigating, measuring, and communicating the properties of different substances which are independent of the amount of the substance</p> <p>PS-M-A2 understanding that all matter is made up of particles called atoms and that atoms of different elements are different</p> <p>PS-M-A3 grouping substances according to similar properties and/or behaviors</p> <p>PS-M-A4 understanding that atoms and molecules are perpetually in motion</p> <p>PS-M-A5 investigating the relationships among temperature, molecular motion, phase changes, and physical properties of matter</p> <p>PS-M-A6 investigating chemical reactions between different substances to discover that new substances formed may have new physical properties and do have new chemical properties</p> <p>PS-M-A7 understanding that during a chemical reaction in a closed system, the mass of the products is equal to that of the reactants</p>	<p><b>PHYSICAL SCIENCE</b></p> <p><b>A. MEASUREMENT AND SYMBOLIC REPRESENTATION</b></p> <p>PS-H-A1 manipulating and analyzing quantitative data using the SI system</p> <p>PS-H-A2 understanding the language of chemistry (formulas, equations, symbols) and its relationship to molecules, atoms, ions, and subatomic particles</p> <p><b>B. ATOMIC STRUCTURE</b></p> <p>PS-H-B1 describing the structure of the atom and identifying and characterizing the particles that compose it (including the structure and properties of isotopes)</p> <p>PS-H-B2 describing the nature and importance of radioactive isotopes and nuclear reactions (fission, fusion, radioactive decay)</p> <p>PS-H-B3 understanding that an atom's electron configuration, particularly that of the outermost electrons, determines the chemical properties of that atom</p> <p><b>C. THE STRUCTURE AND PROPERTIES OF MATTER</b></p> <p>PS-H-C1 distinguishing among elements, compounds, and/or mixtures</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p>PS-E-B3 describing an object's motion by tracing and measuring its position over time</p> <p>PS-E-B4 investigating and describing how the motion of an object is related to the strength of the force (pushing or pulling) and the mass of the object</p> <p><b>C. FORMS OF ENERGY</b></p> <p>PS-E-C1 experimenting and communicating how vibrations of objects produce sound and how changing the rate of vibration varies the pitch</p> <p>PS-E-C2 investigating and describing how light travels and what happens when light strikes an object (reflection, refraction, and absorption)</p> <p>PS-E-C3 investigating and describing different ways heat can be produced and moved from one object to another by conduction</p> <p>PS-E-C4 investigating and describing how electricity travels in a circuit</p> <p>PS-E-C5 investigating and communicating that magnetism and gravity can exert forces on objects without touching the objects</p> <p>PS-E-C6 exploring and describing simple energy transformations</p>	<p>PS-M-A8 discovering and recording how factors such as temperature influence chemical reactions</p> <p>PS-M-A9 identifying elements and compounds found in common foods, clothing, household materials, and automobiles</p> <p><b>B. MOTIONS AND FORCES</b></p> <p>PS-M-B1 describing and graphing the motions of objects</p> <p>PS-M-B2 recognizing different forces and describing their effects (gravity, electrical, magnetic)</p> <p>PS-M-B3 understanding that, when an object is not being subjected to a force, it will continue to move at a constant speed and in a straight line</p> <p>PS-M-B4 describing how forces acting on an object will reinforce or cancel one another, depending upon their direction and magnitude</p> <p>PS-M-B5 understanding that unbalanced forces will cause changes in the speed or direction of an object's motion</p> <p><b>C. TRANSFORMATIONS OF ENERGY</b></p> <p>PS-M-C1 identifying and comparing the characteristics of different types of energy</p>	<p>PS-H-C2 discovering the patterns of physical and chemical properties found on the periodic table of the elements</p> <p>PS-H-C3 understanding that physical properties of substances reflect the nature of interactions among its particles</p> <p>PS-H-C4 separating mixtures based upon the physical properties of their components</p> <p>PS-H-C5 understanding that chemical bonds are formed between atoms when the outermost electrons are transferred or shared to produce ionic and covalent compounds</p> <p>PS-H-C6 recognizing that carbon atoms can bond to one another in chains, rings, and branching networks to form a variety of structures</p> <p>PS-H-C7 using the kinetic theory to describe the behavior of atoms and molecules during phase changes and to describe the behavior of matter in its different phases</p> <p><b>D. CHEMICAL REACTIONS</b></p> <p>PS-H-D1 observing and describing changes in matter and citing evidence of chemical change</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p>PS-E-C7 exploring and describing the uses of energy at school, home, and play</p>	<p>PS-M-C2 understanding the different kinds of energy transformations and the fact that energy can be neither destroyed nor created</p> <p>PS-M-C3 understanding that the Sun is a major source of energy and that energy arrives at Earth's surface as light with a range of wavelengths</p> <p>PS-M-C4 observing and describing the interactions of light and matter (reflection, refraction, absorption, transmission, scattering)</p> <p>PS-M-C5 investigating and describing the movement of heat and the effects of heat in objects and systems</p> <p>PS-M-C6 describing the types of energy that can be involved, converted, or released in electrical circuits</p> <p>PS-M-C7 understanding that energy is involved in chemical reactions</p> <p>PS-M-C8 comparing the uses of different energy resources and their effects upon the environment</p>	<p>PS-H-D2 comparing, contrasting, and measuring the pH of acids and bases using a variety of indicators</p> <p>PS-H-D3 writing balanced equations to represent a variety of chemical reactions (acid/base, oxidation/reduction, etc.)</p> <p>PS-H-D4 analyzing the factors that affect the rate and equilibrium of a chemical reaction</p> <p>PS-H-D5 applying the law of conservation of matter to chemical reactions</p> <p>PS-H-D6 comparing and contrasting the energy changes that accompany changes in matter</p> <p>PS-H-D7 identifying important chemical reactions that occur in living systems, the home, industry, and the environment</p> <p><b>E. FORCES AND MOTION</b></p> <p>PS-H-E1 recognizing the characteristics and relative strengths of the forces of nature (gravitational, electrical, magnetic, nuclear)</p> <p>PS-H-E2 understanding the relationship of displacement, time, rate of motion, and rate of change of motion; representing rate and changes of motion mathematically and graphically</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
		<p>PS-H-E3 understanding effects of forces on changes in motion as explained by Newtonian mechanics</p> <p>PS-H-E4 illustrating how frame of reference affects our ability to judge motion</p> <p><b>F. ENERGY</b></p> <p>PS-H-F1 describing and representing relationships among energy, work, power, and efficiency</p> <p>PS-H-F2 applying the universal law of conservation of matter, energy, and momentum, and recognizing their implications</p> <p><b>G. INTERACTIONS OF ENERGY AND MATTER</b></p> <p>PS-H-G1 giving examples of the transport of energy through wave action</p> <p>PS-H-G2 analyzing the relationship and interaction of magnetic and electrical fields and the forces they produce</p> <p>PS-H-G3 characterizing and differentiating electro-magnetic and mechanical waves and their effects on objects as well as humans</p> <p>PS-H-G4 explaining the possible hazards of exposure to various forms and amounts of energy</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p><b>LIFE SCIENCE</b></p> <p><b>A. CHARACTERISTICS OF ORGANISMS</b></p> <p>LS-E-A1 identifying the needs of plants and animals, based on age-appropriate recorded observations</p> <p>LS-E-A2 distinguishing between living and nonliving things</p> <p>LS-E-A3 locating and comparing major plant and animal structures and their functions</p> <p>LS-E-A4 recognizing that there is great diversity among organisms</p> <p>LS-E-A5 locating major human body organs and describing their functions</p> <p>LS-E-A6 recognizing the food groups necessary to maintain a healthy body</p> <p><b>B. LIFE CYCLES OF ORGANISMS</b></p> <p>LS-E-B1 observing and describing the life cycles of some plants and animals</p> <p>LS-E-B2 observing, comparing, and grouping plants and animals according to likenesses and/or differences</p> <p>LS-E-B3 observing and recording how the offspring of plants and animals are similar to their parents</p>	<p><b>LIFE SCIENCE</b></p> <p><b>A. STRUCTURE AND FUNCTION IN LIVING SYSTEMS</b></p> <p>LS-M-A1 describing the observable components and functions of a cell, such as the cell membrane, nucleus, and movement of molecules into and out of cells</p> <p>LS-M-A2 comparing and contrasting the basic structures and functions of different plant and animal cells</p> <p>LS-M-A3 observing and analyzing the growth and development of selected organisms, including a seed plant, an insect with complete metamorphosis, and an amphibian</p> <p>LS-M-A4 describing the basic processes of photosynthesis and respiration and their importance to life</p> <p>LS-M-A5 investigating human body systems and their functions (including circulatory, digestive, skeletal, respiratory)</p> <p>LS-M-A6 describing how the human body changes with age and listing factors that affect the length and quality of life</p> <p>LS-M-A7 describing communicable and noncommunicable diseases</p>	<p><b>LIFE SCIENCE</b></p> <p><b>A. THE CELL</b></p> <p>LS-H-A1 observing cells, identifying organelles, relating structure to function, and differentiating among cell types</p> <p>LS-H-A2 demonstrating a knowledge of cellular transport</p> <p>LS-H-A3 investigating cell differentiation and describing stages of embryological development in representative organisms</p> <p><b>B. THE MOLECULAR BASIS OF HEREDITY</b></p> <p>LS-H-B1 explaining the relationship among chromosomes, DNA, genes, RNA, and proteins</p> <p>LS-H-B2 comparing and contrasting mitosis and meiosis</p> <p>LS-H-B3 describing the transmission of traits from parent to offspring and the influence of environmental factors on gene expression</p> <p>LS-H-B4 exploring advances in biotechnology and identifying possible positive and negative effects</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p>LS-E-B4 observing, recording, and graphing student growth over time using a variety of quantitative measures (height, weight, linear measure of feet and hands, etc.)</p> <p><b>C. ORGANISMS AND THEIR ENVIRONMENTS</b></p> <p>LS-E-C1 examining the habitats of plants and animals and determining how basic needs are met within each habitat</p> <p>LS-E-C2 describing how the features of some plants and animals enable them to live in specific habitats</p> <p>LS-E-C3 observing animals and plants and describing interaction or interdependence</p>	<p><b>B. REPRODUCTION AND HEREDITY</b></p> <p>LS-M-B1 describing the importance of body cell division (mitosis) and sex cell production (meiosis)</p> <p>LS-M-B2 describing the role of chromosomes and genes in heredity</p> <p>LS-M-B3 describing how heredity allows parents to pass certain traits to offspring</p> <p><b>C. POPULATIONS AND ECOSYSTEMS</b></p> <p>LS-M-C1 constructing and using classification systems based on the structure of organisms</p> <p>LS-M-C2 modeling and interpreting food chains and food webs</p> <p>LS-M-C3 investigating major ecosystems and recognizing physical properties and organisms within each</p> <p>LS-M-C4 explaining the interaction and interdependence of nonliving and living components within ecosystems</p> <p><b>D. ADAPTATIONS OF ORGANISMS</b></p> <p>LS-M-D1 describing the importance of plant and animal adaptation, including local examples</p>	<p><b>C. BIOLOGICAL EVOLUTION</b></p> <p>LS-H-C1 exploring experimental evidence that supports the theory of the origin of life</p> <p>LS-H-C2 recognizing the evidence for evolution</p> <p>LS-H-C3 discussing the patterns, mechanisms, and rate of evolution</p> <p>LS-H-C4 classifying organisms</p> <p>LS-H-C5 distinguishing among the kingdoms</p> <p>LS-H-C6 comparing and contrasting life cycles of organisms</p> <p>LS-H-C7 comparing viruses to cells</p> <p><b>D. INTERDEPENDENCE OF ORGANISMS</b></p> <p>LS-H-D1 illustrating the biogeochemical cycles and explaining their importance</p> <p>LS-H-D2 describing trophic levels and energy flows</p> <p>LS-H-D3 investigating population dynamics</p> <p>LS-H-D4 exploring how humans have impacted ecosystems and the need for societies to plan for the future</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
	<p>LS-M-D2 explaining how some members of a species survive under changed environmental conditions</p>	<p><b>E. MATTER, ENERGY, AND ORGANIZATION OF LIVING SYSTEMS</b></p> <p>LS-H-E1 comparing and contrasting photosynthesis and cellular respiration emphasizing their relationships</p> <p>LS-H-E2 recognizing the importance of the ATP cycle in energy usage within the cell</p> <p>LS-H-E3 differentiating among levels of biological organization</p> <p><b>F. SYSTEMS AND THE BEHAVIOR OF ORGANISMS</b></p> <p>LS-H-F1 identifying the structure and functions of organ systems</p> <p>LS-H-F2 identifying mechanisms involved in homeostasis</p> <p>LS-H-F3 recognizing that behavior is the response of an organism to internal changes and/or external stimuli</p> <p>LS-H-F4 recognizing that behavior patterns have adaptive value</p> <p><b>G. PERSONAL AND COMMUNITY HEALTH</b></p> <p>LS-H-G1 relating fitness and health to longevity</p> <p>LS-H-G2 contrasting how organisms cause disease</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p><b>EARTH AND SPACE SCIENCE</b></p> <p><b>A. PROPERTIES OF EARTH MATERIALS</b></p> <p>ESS-E-A1 understanding that earth materials are rocks, minerals, and soils</p> <p>ESS-E-A2 understanding that approximately three-fourths of Earth's surface is covered with water and how this condition affects weather patterns and climates</p> <p>ESS-E-A3 investigating, observing, and describing how water changes from one form to another and interacts with the atmosphere</p> <p>ESS-E-A4 investigating, observing, measuring, and describing changes in daily weather patterns and phenomena</p>	<p><b>EARTH AND SPACE SCIENCE</b></p> <p><b>A. STRUCTURE OF EARTH</b></p> <p>ESS-M-A1 understanding that Earth is layered by density with an inner and outer core, a mantle, and a thin outer crust</p> <p>ESS-M-A2 understanding that Earth's crust and solid upper mantle are dividing plates that move in response to convection currents (energy transfers) in the mantle</p> <p>ESS-M-A3 investigating the characteristics of earthquakes and volcanoes and identifying zones where they may occur</p> <p>ESS-M-A4 investigating how soils are formed from weathered rock and decomposed organic material</p>	<p>LS-H-G3 explaining the role of the immune system in fighting disease</p> <p>LS-H-G4 exploring current research on the major diseases with regard to cause, symptoms, treatment, prevention, and cure</p> <p>LS-H-G5 researching technology used in prevention, diagnosis, and treatment of diseases/disorders</p> <p><b>EARTH AND SPACE SCIENCE</b></p> <p><b>A. ENERGY IN EARTH'S SYSTEM</b></p> <p>ESS-H-A1 investigating the methods of energy transfer and identifying the Sun as the major source of energy for most of Earth's systems</p> <p>ESS-H-A2 modeling the seasonal changes in the relative position and appearance of the Sun and inferring the consequences with respect to Earth's temperature</p> <p>ESS-H-A3 explaining fission and fusion in relation to Earth's internal and external heat sources</p> <p>ESS-H-A4 explaining how decay of radioactive isotopes and the gravitational energy from Earth's original formation generates Earth's internal heat</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
ESS-E-A5 observing and communicating that rocks are composed of various substances ESS-E-A6 observing and describing variations in soil ESS-E-A7 investigating fossils and describing how they provide evidence about plants and animals that lived long ago and the environment in which they lived	ESS-M-A5 identifying the characteristics and uses of minerals and rocks and recognizing that rocks are mixtures of minerals ESS-M-A6 explaining the processes involved in the rock cycle ESS-M-A7 modeling how landforms result from the interaction of constructive and destructive forces ESS-M-A8 identifying the man-made and natural causes of coastal erosion and the steps taken to combat it	ESS-H-A5 demonstrating how the Sun's radiant energy causes convection currents within the atmosphere and the oceans ESS-H-A6 describing the energy transfer from the Sun to Earth and its atmosphere as it relates to the development of weather and climate patterns ESS-H-A7 modeling the transfer of Earth's internal heat by way of convection currents in the mantle which powers the movement of the lithospheric plates
<b>B. OBJECTS IN THE SKY</b> ESS-E-B1 observing and describing the characteristics of objects in the sky ESS-E-B2 demonstrating how the relationship of Earth, the Moon, and the Sun causes eclipses and moon phases ESS-E-B3 observing and recording the changing appearances and positions of the Moon in the sky at night and determining the monthly pattern of lunar change ESS-E-B4 modeling changes that occur because of the rotation of Earth (alternation of night and day) and the revolution of Earth around the Sun ESS-E-B5 understanding that the Sun, a star, is a source of heat and light energy and identifying its effects upon Earth	ESS-M-A9 compare and contrast topographic features of the ocean floor to those formed above sea level ESS-M-A10 explaining (illustrating) how water circulates—on and through the crust, in the oceans, and in the atmosphere—in the water cycle ESS-M-A11 understanding that the atmosphere interacts with the hydrosphere to affect weather and climate conditions ESS-M-A12 predicting weather patterns through use of a weather map	<b>B. GEOCHEMICAL CYCLES</b> ESS-H-B1 illustrating how stable chemical atoms or elements are recycled through the solid earth, oceans, atmosphere, and organisms ESS-H-B2 demonstrating Earth's internal and external energy sources as forces in moving chemical atoms or elements
<b>B. EARTH HISTORY</b> ESS-M-B1 investigating how fossils show the development of life over time		<b>C. THE ORIGIN AND EVOLUTION OF THE EARTH SYSTEM</b> ESS-H-C1 explaining the formation of the solar system from a nebular cloud of dust and gas ESS-H-C2 estimating the age of Earth by using dating techniques

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p>ESS-E-B6 understanding that knowledge of Earth as well as of the universe is gained through space exploration</p> <p><b>C. EARTH IN THE SOLAR SYSTEM</b></p> <p>ESS-M-C1 identifying the characteristics of the Sun and other stars</p> <p>ESS-M-C2 comparing and contrasting the celestial bodies in our solar system</p> <p>ESS-M-C3 investigating the force of gravity and the ways gravity governs motion in the solar system and objects on Earth</p> <p>ESS-M-C4 modeling the motions of the Earth-Moon-Sun system to explain day and night, a year, eclipses, moon phases, and tides</p> <p>ESS-M-C5 modeling the position of Earth in relationship to other objects in the solar system</p> <p>ESS-M-C6 modeling and describing how radiant energy from the Sun affects phenomena on the Earth's surface, such as winds, ocean currents, and the water cycle</p>	<p>ESS-M-B2 devising a model that demonstrates supporting evidence that Earth has existed for a vast period of time</p> <p>ESS-M-B3 understanding that the Earth processes, such as erosion and weathering, that affect Earth today are similar to those which occurred in the past</p> <p><b>D. THE ORIGIN AND EVOLUTION OF THE UNIVERSE</b></p> <p>ESS-H-D1 identifying scientific evidence that supports the latest theory of the age and origin of the universe</p> <p>ESS-H-D2 describing the organization of the known universe</p> <p>ESS-H-D3 comparing and contrasting the Sun with other stars</p> <p>ESS-H-D4 identifying the elements found in the Sun and other stars by investigating the spectra</p> <p>ESS-H-D5 describing the role of hydrogen in the formation of all the natural elements</p> <p>ESS-H-D6 demonstrating the laws of motion for orbiting bodies</p>	<p>ESS-H-C3 communicating the geologic development of Louisiana</p> <p>ESS-H-C4 examining fossil evidence as it relates to the evolution of life and the resulting changes in the amount of oxygen in the atmosphere</p> <p>ESS-H-C5 explaining that natural processes and changes in Earth's system may take place in a matter of seconds or develop over billions of years</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<p><b>SCIENCE AND THE ENVIRONMENT</b></p> <p>SE-E-A1 understanding that an ecosystem is made of living and non-living components</p> <p>SE-E-A2 understanding the components of a food chain</p> <p>SE-E-A3 identifying ways in which humans have altered their environment, both in positive and negative ways, either for themselves or for other living things</p> <p>SE-E-A4 understanding that the original sources of all material goods are natural resources and that the conserving and recycling of natural resources is a form of stewardship</p> <p>SE-E-A5 understanding that most plant and animal species are threatened or endangered today due to habitat loss or change</p>	<p>ESS-M-C7 modeling and explaining how seasons result from variations in amount of the Sun's energy hitting the surface due to the tilt of Earth's rotation on its axis and the length of the day</p> <p>ESS-M-C8 understanding that space exploration is an active area of scientific and technological research and development</p> <p><b>SCIENCE AND THE ENVIRONMENT</b></p> <p>SE-M-A1 demonstrating knowledge that an ecosystem includes living and nonliving factors and that humans are an integral part of ecosystems</p> <p>SE-M-A2 demonstrating an understanding of how carrying capacity and limiting factors affect plant and animal populations</p> <p>SE-M-A3 defining the concept of pollutant and describing the effects of various pollutants on ecosystems</p> <p>SE-M-A4 understanding that human actions can create risks and consequences in the environment</p> <p>SE-M-A5 tracing the flow of energy through an ecosystem and demonstrating a knowledge of the roles of producers, consumers, and decomposers in the ecosystem</p>	<p>ESS-H-D7 describing the impact of technology on the study of Earth, the solar system, and the universe</p> <p><b>SCIENCE AND THE ENVIRONMENT</b></p> <p><b>A. ECOLOGICAL SYSTEMS AND INTERACTIONS</b></p> <p>SE-H-A1 demonstrating an understanding of the functions of Earth's major ecological systems</p> <p>SE-H-A2 investigating the flow of energy in ecological systems</p> <p>SE-H-A3 describing how habitat, carrying capacity, and limiting factors influence plant and animal populations (including humans)</p> <p>SE-H-A4 understanding that change is a fundamental characteristic of every ecosystem and that ecosystems have varying capacities for change and recovery</p> <p>SE-H-A5 describing the dynamic interactions between divisions of the biosphere</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
	<p>SE-E-A6 distinguishing between renewable and nonrenewable resources and understanding that nonrenewable natural resources are not replenished through the natural cycles and thus are strictly limited in quantity</p> <p>SE-M-A7 demonstrating knowledge of the natural cycles, such as the carbon cycle, nitrogen cycle, water cycle, and oxygen cycle</p> <p>SE-M-A8 investigating and analyzing how technology affects the physical, chemical, and biological factors in an ecosystem</p> <p>SE-M-A9 demonstrating relationships of characteristics of soil types to agricultural practices and productivity</p> <p>SE-M-A10 identifying types of soil erosion and preventive measures</p>	<p>SE-H-A6 describing and explaining Earth's biochemical and geochemical cycles and their relationship to ecosystem stability</p> <p>SE-H-A7 comparing and contrasting the dynamic interaction within the biosphere</p> <p>SE-H-A8 analyzing evidence that plant and animal species have evolved physical, biochemical, and/or behavioral adaptations to their environments</p> <p>SE-H-A9 demonstrating an understanding of influencing factors of biodiversity</p> <p>SE-H-A10 explaining that all species represent a vital link in a complex web of interaction</p> <p>SE-H-A11 understanding how pollutants can affect living systems</p> <p><b>B. RESOURCES AND RESOURCE MANAGEMENT</b></p> <p>SE-H-B1 explaining the relationships between renewable and nonrenewable resources</p> <p>SE-H-B2 comparing and contrasting conserving and preserving resources</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
		<p>SE-H-B3 recognizing that population size and geographic and economic factors result in the inequitable distribution of Earth's resources</p> <p>SE-H-B4 comparing and contrasting long and short-term consequences of resource management</p> <p>SE-H-B5 analyzing resource management</p> <p>SE-H-B6 recognizing that sustainable development is a process of change in which resource use, investment direction, technological development, and institutional change meet society's present as well as future needs</p> <p><b>C. ENVIRONMENTAL AWARENESS AND PROTECTION</b></p> <p>SE-H-C1 evaluating the dynamic interaction of land, water, and air and its relationship to living things in maintaining a healthy environment</p> <p>SE-H-C2 evaluating the relationships between quality of life and environmental quality</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
		<p>SE-H-C3 investigating and communicating how environmental policy is formed by the interaction of social, economic, technological, and political considerations</p> <p>SE-H-C4 demonstrating that environmental decisions include analyses that incorporate ecological, health, social, and economic factors</p> <p>SE-H-C5 analyzing how public support affects the creation and enforcement of environmental laws and regulations</p> <p><b>D. PERSONAL CHOICES AND RESPONSIBLE ACTIONS</b></p> <p>SE-H-D1 demonstrating the effects of personal choices and actions on the natural environment</p> <p>SE-H-D2 analyzing how individuals are capable of reducing and reversing their impact on the environment through thinking, planning, education, collaboration, and action</p> <p>SE-H-D3 demonstrating that the most important factor in prevention and control of pollution is education</p> <p>SE-H-D4 demonstrating a knowledge that environmental issues should be a local and global concern</p>

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
		<p>SE-H-D5 recognizing that the development of accountability toward the environment is essential for sustainability</p> <p>SE-H-D6 developing an awareness of personal responsibility as stewards of the local and global environment</p>

## **Louisiana Educational Assessment Program**

### **Science Achievement Level Descriptors: Grade 8**

**Note:** These descriptors have been modified slightly from the 2000 publication to match the condensed descriptors on the updated 2006 Student Reports.

<b>Achievement Level</b>	<b>Descriptors</b>
<b>Advanced</b>	<p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• use abstract concepts/theories to explain everyday situations;</li> <li>• describe many elements of a system and explain the limits of a particular example;</li> <li>• design complex models; and</li> <li>• demonstrate an understanding of the nature and limits of science and that science is subject to change.</li> </ul> <p>When given a problem, students at this level can design a simple investigation by</p> <ul style="list-style-type: none"> <li>• asking appropriate questions and identifying those questions that are testable and not testable;</li> <li>• manipulating variables;</li> <li>• using mathematics and appropriate tools to gather, analyze, and interpret data;</li> <li>• relating several variables to explain phenomena; and</li> <li>• developing descriptions, explanations, and appropriate displays to communicate and defend data.</li> </ul>
<b>Mastery</b>	<p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• understand complex concepts/theories and communicate them;</li> <li>• demonstrate an understanding of elements of a system;</li> <li>• demonstrate understanding of models and diagrams; and</li> <li>• recognize various limits of science and its changes.</li> </ul> <p>When given a problem, students at this level can</p> <ul style="list-style-type: none"> <li>• use a simple investigation, design an experiment, and link ideas while collecting data;</li> <li>• use mathematics and appropriate tools to design methods of display for data; and</li> <li>• draw conclusions from data.</li> </ul>
<b>Basic</b>	<p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• possess a fundamental knowledge of some theories and concepts;</li> <li>• identify elements of a system and state one limiting factor when given a particular example;</li> <li>• identify a simple model;</li> <li>• begin to understand the nature of science; and</li> <li>• show an awareness that science is subject to change.</li> </ul> <p>When given a problem, students at this level can</p> <ul style="list-style-type: none"> <li>• design a simple investigation by asking appropriate questions;</li> <li>• identify the important variables and select appropriate tools to gather data; and</li> <li>• interpret basic data and communicate a conclusion.</li> </ul>

<b>Approaching Basic</b>	<p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• identify related elements of a system;</li> <li>• identify elements of a simple model; and</li> <li>• show some awareness that science is developing and changing.</li> </ul> <p>When given an investigation, students at this level can</p> <ul style="list-style-type: none"> <li>• answer specific scientific questions;</li> <li>• identify at least one variable in an experiment; and</li> <li>• seek and identify basic scientific data and communicate it.</li> </ul>
<b>Unsatisfactory</b>	<p>Students scoring at this level have not demonstrated the fundamental knowledge and skills needed for the next level of schooling. Students at this level generally have not exhibited the ability to</p> <ul style="list-style-type: none"> <li>• identify related elements of a system;</li> <li>• identify elements of a simple model; and</li> <li>• show some awareness that science is developing and changing.</li> </ul> <p>When given an investigation, students at this level did not exhibit the ability to</p> <ul style="list-style-type: none"> <li>• answer specific scientific questions;</li> <li>• identify at least one variable in an experiment; and</li> <li>• seek and identify basic scientific data and communicate it.</li> </ul>



# Chapter 4: LEAP Social Studies, Grade 8

This chapter provides specifications for the Social Studies test for grade 8 LEAP. It describes the content and the format of the test, provides the number and types of items, and explains how the standards and benchmarks for Social Studies are assessed.

## Test Structure

The Social Studies test consists of three sessions and is administered in one day. Students are allowed as much time as they need to complete each session, but suggested times are provided in the *Test Administration Manual*; it explains the procedures for allowing students additional time to complete a session of the test.

**Session 1:** 30 multiple-choice items

**Session 2:** 30 multiple-choice items

**Session 3:** 4 constructed-response items

## Item Types

The multiple-choice items consist of a stem and four answer options. They measure all Social Studies strands: Geography, Civics, Economics, and History.

The constructed-response test items may require students to construct or interpret a chart, graph, map, timeline, or other graphic representation, or to supply a written answer.

## Test Description

Each constructed-response item assesses a different Social Studies strand. The constructed-response items require higher-order thinking (for example, grasp of a concept, analysis of information, or application of a skill).

Both multiple-choice and constructed-response items may use stimulus material, for example:

- a map or illustration of a globe
- a table or graph presenting numerical data to be read or interpreted
- a timeline, chart, illustration, photograph, or graphic organizer
- an excerpt or article from a newspaper or magazine
- an excerpt from a primary source
- an excerpt from a secondary source

The reading level of test items is minimized to the extent possible (except for necessary social studies terms) so that students' reading ability does not interfere with their ability to demonstrate their Social Studies knowledge and skills.

## Scoring the Social Studies Sessions

Each multiple-choice item has four response options (A, B, C, and D) and is scored right/wrong. Correct answers receive a score of 1; incorrect answers receive a score of 0.

Each constructed-response item is scored using a 4-point scoring rubric. The specific rubric for each item is developed from the general 4-point scoring rubric for LEAP, GEE, and iLEAP.

This general rubric (scoring guide) explains the scale that is used to score constructed-response items. Each score level description presents the general characteristics of a response that would earn the associated rating (0, 1, 2, 3, or 4). For the actual test, an item-specific rubric is developed for each constructed-response item.

**Table 4.1: General Scoring Rubric—Constructed-Response Items**

Score Level	Description of Score Level
4	<ul style="list-style-type: none"><li>• The response demonstrates in-depth understanding of the relevant content and/or procedures.</li><li>• The student completes all important components of the task accurately and communicates ideas effectively.</li><li>• Where appropriate, the student offers insightful interpretations and/or extensions.</li><li>• Where appropriate, the student chooses more sophisticated reasoning and/or efficient procedures.</li></ul>
3	<ul style="list-style-type: none"><li>• The response demonstrates understanding of major concepts and/or processes, although less important ideas or details may be overlooked or misunderstood.</li><li>• The student completes the most important aspects of the task accurately and communicates clearly.</li><li>• The student's logic and reasoning may contain minor flaws.</li></ul>
2	<ul style="list-style-type: none"><li>• The student completes some parts of the task successfully.</li><li>• The response demonstrates gaps in conceptual understanding.</li></ul>
1	<ul style="list-style-type: none"><li>• The student completes only a small portion of the task and/or shows minimal understanding of the concepts and/or processes.</li></ul>
0	<ul style="list-style-type: none"><li>• The student's response is incorrect, irrelevant, too brief to evaluate, or blank.</li></ul>

## Social Studies Test Specifications, Grade 8

**Table 4.2: Number of Multiple-Choice Items in Strands/Categories**

Strands/Categories	Items	% of Total Points
<b>GEOGRAPHY</b> A. The World in Spatial Terms B. Places and Regions C. Physical and Human Systems D. Environment and Society	15	25
<b>CIVICS</b> A. Structure and Purposes of Government B. Foundations of the American Political System C. International Relationships D. Roles of the Citizen	12	20
<b>ECONOMICS</b> A. Fundamental Economic Concepts B. Individuals, Households, Businesses, and Governments C. The Economy as a Whole	9	15
<b>HISTORY</b> A. Historical Thinking Skills B. United States History C. World History D. Louisiana History	24	40
<b>TOTAL</b>	60	100

## **STRANDS, STANDARDS, AND BENCHMARKS ASSESSED**

This section presents the strands, standards, and benchmarks assessed on the grade 8 LEAP Social Studies assessment. The section includes the text of each benchmark, followed by a list of key concepts explaining what students **may** be expected to know and be able to do to demonstrate the content knowledge and skills described in each benchmark.

The information is organized by the four social studies strands: Geography, Civics, Economics, and History. Each strand is further organized by categories. Benchmarks are organized into three or four thematic categories within each strand. These categories (for example, Places and Regions, or Historical Thinking Skills) provide further content definition by highlighting the underlying themes within the domain of each strand.

### **Strand G: Geography—Physical and Cultural Systems**

**Standard:** Students develop a spatial understanding of Earth’s surface and the processes that shape it, the connections between people and places, and the relationship between man and his environment.

### **Strand C: Civics—Citizenship and Government**

**Standard:** Students develop an understanding of the structure and purposes of government, the foundations of the American democratic system, and the role of the United States in the world, while learning about the rights and responsibilities of citizenship.

### **Strand E: Economics—Interdependence and Decision Making**

**Standard:** Students develop an understanding of fundamental economic concepts as they apply to the interdependence and decision making of individuals, households, businesses, and governments in the United States and the world.

### **Strand H: History—Time, Continuity, and Change**

**Standard:** Students develop a sense of historical time and historical perspective as they study the history of their community, state, nation, and world.

The following information is presented for each category:

**Benchmarks Assessed:** the text of all benchmarks eligible for LEAP

#### **Assessment Limits:**

- any benchmarks that are excluded from LEAP
- any special restrictions on test content
- any content barred from testing of an assessed benchmark
- any content emphasis for LEAP

**Key Concepts:** important concepts and related skills that may be assessed

## **Explanation of Codes**

The benchmarks are numbered consecutively in each grade level and grouped by strand and thematic category. For example:

*Strand:*      Geography

*Categories:*

- A. The World in Spatial Terms
- B. Places and Regions
- C. Physical and Human Systems
- D. Environment and Society

Benchmarks are coded by strand, standard, category, and grade cluster (E, M, H). The first term in the code always refers to the strand. The second term gives the standard number and category. The third term indicates the grade cluster and benchmark number.

**Table 4.3: Examples of Social Studies Codes**

<b>Code</b>	<b>Translation</b>
G-1B-E1	Geography – standard 1, category B – elementary, benchmark 1
H-1A-H3	History – standard 1, category A – high school, benchmark 3

## Strand G: Geography

### A. The World in Spatial Terms

#### Benchmarks Assessed

G-1A-M1	identifying and describing the characteristics, functions, and applications of various types of maps and other geographic representations, tools, and technologies
G-1A-M2	interpreting and developing maps, globes, graphs, charts, models, and databases to analyze spatial distributions and patterns

#### Assessment Limits:

- Benchmark G-1A-M3 (organizing and displaying information about the location of geographic features and places by using mental mapping skills) is not assessed due to its focus on mental mapping skills.
- Any information students may need to construct a map is presented in stimulus material. Students do not have to rely on their own mental picture of an area.
- Any illustration of a globe will be a side view, not a top-down view.
- G-1A-M2 is particularly well suited for a constructed-response item.

#### Key Concepts:

- Identify and describe characteristics, functions, or applications of various types of maps (for example, political, physical, topographic, natural resource, climate, precipitation, climate, population distribution/density).
- Compare the uses of different types of maps, including two different types of maps of the same area.
- Read and interpret a graph, chart, or diagram.
- Read and interpret a map, using a map key/legend and symbols, distance scale, compass rose, and cardinal or intermediate directions.
- Analyze the distributions or patterns shown on a map (for example, compare/contrast population or resource distributions, climate, vegetation, or elevation).
- Use time zones in the United States or the International Date Line to interpret a map or representation of a globe.
- Use latitude (parallels) and longitude (meridians) to determine direction or to locate or compare points on a map or representation of a globe.
- Locate major landforms and geographic features, places, and bodies of water (waterways) on a map of Louisiana or the United States.

- Locate major features on a map of an area of the world, referring to the equator, the Prime Meridian, the hemispheres, the Tropic of Cancer, the Tropic of Capricorn, the North and South Pole, or latitude and longitude.
- Construct a map based on given narrative information.
- Add features to a map based on given narrative information (for example, the location of capital/major cities, major landforms, bodies of water, battle sites).
- Construct a chart or diagram to display geographical information in an organized way (for example, resources in various regions of Louisiana).
- Construct a circle graph, bar graph, line graph, or pictograph to represent given data.

## B. Places and Regions

### Benchmarks Assessed

G-1B-M1	explaining and analyzing both the physical and human phenomena associated with specific places, including precipitation and settlement patterns
G-1B-M2	identifying and describing significant physical features that have influenced historical events
G-1B-M3	identifying criteria used to define regions and explaining how and why regions change
G-1B-M4	describing and explaining how personal interests, culture, and technology affect people's perceptions and uses of places and regions

### Assessment Limits:

- All benchmarks in thematic category B are eligible for assessment on grade 8 LEAP.
- Test items for G-1B-M1 do not assess effects of human action on the physical environment. This topic is reserved for benchmark G-1D-M3.
- For G-1B-M3, how and why regions *change* is limited to physical causes and effects, due to coverage of human factors under G-1D-M1.
- G-1B-M4 will be assessed only with constructed-response items.
- Assessment of G-1B-M4 may include a political cartoon highlighting a controversy about the use of places or regions.

### Key Concepts:

- Describe and analyze the distinguishing physical characteristics of a given place, for example:
  - landforms and bodies of water (waterways)*
  - latitudinal location, distance from the equator or poles, altitude*
  - climate zones, precipitation patterns, vegetation patterns, ecosystems*

- Describe and analyze the distinguishing human characteristics of a given place, for example:
  - migration and settlement patterns*
  - population density*
  - land use*
  - cultural similarities*
- Identify regions of the U.S. and major regions of the world in terms of their primary physical characteristics (for example, rain forests, deserts, Atchafalaya Basin).
- Identify and describe the role of land and climatic conditions conducive to human settlement in North America and other regions of the world.
- Describe how landforms affect migration and settlement patterns.
- Evaluate and use information on a map (for example, identify the most appropriate place for a settlement given a map and a list of potential settlers' needs).
- Identify physical features that have influenced historical events and describe their influence, for example:
  - the role of the Ohio River Valley in the American Revolution*
  - the role of the Mississippi River/swamp in the Battle of New Orleans*
  - the role of the Apennine Mountains in the Punic Wars*
  - the Nile and Tigris-Euphrates Rivers as cradles of civilization*
  - the geographical factors related to Little Bighorn*
  - the influence of winter in Russia on the defeat of Napoleon's army*
- Identify ways in which location and physical features generally influence the development or life of a region, for example:
  - effects of natural barriers*
  - remote location vs. accessibility*
  - island conditions*
- Identify physical criteria or other factors used to define regions.
- Apply given criteria to distinguish one region from another.
- Explain physical processes that produce distinctive landforms.
- Identify the physical processes and natural disasters that change regions, for example:
  - volcanic activity, plate tectonics, earthquakes, global warming*
  - erosion by water current, flood, coastal storm, ice, or wind*
  - processes affecting bodies of water (for example, buildup of silt)*
- Explain the effects of a physical process or natural disaster, for example:
  - migration of the Sahara*
  - destruction of rain forests*
  - erosion of riverbanks*
  - reshaping of shorelines*

- Explain how or why specific regions are changing as a result of physical phenomena, for example:
  - buildup of the Mississippi Delta region*
  - coastal erosion of Louisiana wetlands and the Gulf Coast*
- Explain how goals and interests affect the uses of places or regions, for example:
  - exploration goal of “gold, glory, and God”*
  - population expansion vs. preservation of natural habitats*
  - industrial development vs. preservation of rain forests/forest lands*
- Explain how technological advances and modern innovations affect the uses of places.

C. Physical and Human Systems	
Benchmarks Assessed	
G-1C-M2	identifying key demographic concepts and using these concepts to analyze the population characteristics of a country or region
G-1C-M3	describing the characteristics and patterns of human settlement in different regions of the world and analyzing the impact of urbanization
G-1C-M4	analyzing types, patterns, and effects of human migration over time
G-1C-M5	tracing local and worldwide patterns of cultural diffusion and analyzing their causes and effects
G-1C-M6	comparing historical and contemporary patterns of economic interdependence
G-1C-M7	explaining how cooperation and conflict among people contribute to the political divisions on Earth’s surface

#### Assessment Limits:

- Benchmark G-1C-M1 (predicting and explaining how physical features help to shape patterns and arrangements in the physical environment) is not assessed on LEAP, in favor of assessing G-1B-M3.

#### Key Concepts:

- Analyze the population characteristics and other demographic information about a country or region, for example:
  - Population characteristics (demographic variables):***
  - *population size and population density*
  - *gender, race/ethnicity, age*
  - *religion*
  - *birth rate, death rate, infant mortality rate*
  - *life expectancy*
  - *migration (immigration/emigration)*

—***Other demographic concepts:***

- *education*
- *housing and transportation*
- *urban/suburban/rural*
- *urbanization*
- *crime rate*
- *cultural diffusion*
- *cultural diversity*

- Construct a chart or draw a graph based on given demographic data or information (for example, to show population characteristics or demographic trends).
- Explain patterns of rural/urban migration, or the positive and negative consequences of urban development (for example, cultural diversity, overcrowding).
- Explain why humans settled and formed societies in specific regions.
- Explain why immigrant groups settled in specific areas (for example, the Acadians).
- Identify political, cultural, and economic motives for migration, for example:
  - retire to the U.S. Sunbelt*
  - find jobs or new opportunities*
  - escape oppression or persecution*
  - flee severe and chronic climate changes such as drought*
- Explain how immigration has influenced specific areas.
- Explain the effects of changing population distribution during a given period of time.
- Explain the role of geographical factors in migration (for example, how the Mississippi River affected westward movement).
- Analyze a flow chart illustrating the movement of people, goods, or ideas between regions or countries.
- Construct a flow chart based on given information (for example, describing triangular trade).
- Describe the factors that contribute to cultural diffusion, such as the trade of goods and services.
- Identify or explain factors or events that facilitated cultural diffusion (for example, European exploration/trade, the Crusades).
- Describe the causes and effects of cultural diffusion in the United States.
- Describe the causes and effects of cultural diversity in Louisiana.
- Describe parallels or differences between an historical and contemporary example of economic interdependence, based on given information.
- Explain conditions and motivations that contribute to conflict or cooperation within and among nations (for example, resource needs, territorial expansion, space exploration).
- Identify or explain examples of cooperation and conflict, and the ways societies interact to meet their needs (for example, trade/political treaties, revolution, cold war).

- Explain the following terms used to describe human systems:
  - infrastructure*
  - economic interdependence*
  - trade*
  - territorial expansion*

## D. Environment and Society

### Benchmarks Assessed

G-1D-M1	analyzing and evaluating the effects of human actions upon the physical environment
G-1D-M2	explaining and giving examples of how characteristics of different physical environments affect human activities
G-1D-M3	analyzing the worldwide distribution and utilization of natural resources

### Assessment Limits:

- G-1D-M2 is particularly well suited for a constructed-response item.
- Benchmark G-1D-M4 (identifying problems that relate to the contemporary geographic issues and researching possible solution) is not assessed on LEAP.
- Any questions involving levees or canals in category D will concentrate on Louisiana.

### Key Concepts:

- Identify these environmental terms/concepts:
  - natural resources: renewable, nonrenewable, sustainable, limited*
  - conservation of land and natural resources*
  - hydrology (surface/underground water, cycle of precipitation/evaporation)*
  - global warming, El Niño, acid rain, dead zones*
- Explain the following terms as they relate to the interaction between society and the environment:
  - Physical environments:***
    - *rain forest*
    - *agricultural land*
    - *flood plains*
    - *wetlands*
    - *barrier islands*
    - *upland regions*
    - *landlocked areas*
    - *natural habitats*

—***Human adaptations of physical environment:***

- *irrigation, terracing*
- *levee, canal, dam, flood/sea wall*
- *timbering/deforestation*
- *mining, industrialization, reclaiming land*
- *roads, tunnels, bridges, railroads*

—***Natural resources:***

- *forests/timberland*
- *fresh water*
- *coal, oil, natural gas*
- *sea water (salt)*
- *minerals in the earth (silver, gold, copper, tin, diamonds)*
- *plants, roots, herbs (medicines, dyes)*

- Analyze or evaluate actual consequences of environmental modifications on landforms, natural resources, or plant and animal life.
- Predict the effects of potential environmental modifications and overpopulation on natural resources or plant and animal life.
- Explain human activities that pollute the environment and identify obstacles to controlling pollution of all kinds (for example, air, water, land, or noise).
- Describe the difference between renewable and nonrenewable natural resources, and identify ways to sustain limited resources for future use.
- Identify or describe the benefits or challenges inherent in a particular environment, for example:
  - harsh climates or short agricultural growing seasons*
  - characteristics that make New Orleans an excellent port*
- Analyze ways in which a physical environment affects its inhabitants' way of life, for example:
  - effects of noise, overcrowding, lack of space, and/or lack of fresh air on urban life*
  - environmental factors affecting life in upland regions, flood plains, etc.*
- Explain and give examples of how people adapt to living in a particular physical environment.
- Analyze world or regional distribution of natural resources in terms of the need to import or the capacity to export.
- Analyze the relationship between a country's standard of living and its local natural resources (for example, the effects of oil or natural gas reserves in a region).
- Draw conclusions from a map showing world or regional distribution of natural resources (for example, coal, oil, mineral deposits, timberland, or rain forests).
- Map the locations of major environmental resources, based on given information.
- Identify or explain the distribution and uses of Louisiana's natural resources.

## Strand C: Civics

### A. Structure and Purposes of Government

#### Benchmarks Assessed

C-1A-M2	describing the essential characteristics of various systems of government
C-1A-M3	explaining how the powers of the government are distributed, shared, and limited by the United States and Louisiana constitutions
C-1A-M4	explaining the purposes of state constitutions and describing the relationship of state constitutions to the federal constitution
C-1A-M5	describing the organization and major responsibilities of local, state, and national governments
C-1A-M6	identifying government leaders and representatives at the local, state, and national levels and explaining their powers and the limits on their powers
C-1A-M7	explaining the importance of law in the American constitutional system and applying criteria to evaluate rules and laws
C-1A-M9	explaining the necessity of taxes and describing the purposes for which tax revenues are used
C-1A-M10	identifying and evaluating different types of taxes

#### Assessment Limits:

- C-1A-M1 (explaining major ideas about why governments are necessary and evaluating competing positions on the purposes government should serve) is not assessed on LEAP.
- C-1A-M8 (explaining how public policy is formed, debated, and carried out at the local, state, and national levels) is not assessed on LEAP.
- For C-1A-M2, *communism* and *socialism* are excluded, as they may be viewed as social/economic systems rather than forms of government.
- Items for C-1A-M5 build from assessment of C-1B-E1 at grade 4.
- Items for C-1A-M6 build from assessment of C-1A-E5 at grade 4.
- C-1A-M10 on types of taxes is so similar to Economics benchmark E-1B-M5 that these two benchmarks are not assessed on the same test form.
- Comparing, contrasting, or evaluating various forms of governments is not assessed on LEAP. These concepts are assessed only at the high school level.
- Benchmarks C-1A-M2 through C-1A-M6, C-1A-M9, and C-1A-M10 are assessed only with multiple-choice items.
- Benchmark C-1A-M7 is assessed only with a constructed-response item.

## Key Concepts:

- Identify the characteristics and organization of various systems of national government, for example:
  - democracy (*direct vs. indirect, republic, parliamentary*)
  - monarchy (*constitutional vs. absolute*)
  - oligarchy
  - totalitarian/authoritarian/dictatorship
  - leaders/rulers (*president, prime minister, king/queen, dictator*)
- Explain the meaning of the term *federalism*.
- Describe the purposes of a state constitution.
- Identify the powers of the U.S. federal government, the powers of state government and the powers they share (according to the U.S. and Louisiana constitutions).
- Identify the powers of the three branches of the federal government, the limits of their respective powers, and the key positions within each branch, for example:
  - executive branch: *president, vice president, cabinet members*
  - legislative branch: *members of Congress, president of the Senate, House/Senate majority and minority leaders, Speaker of the House, majority/minority whip, president pro tempore*
  - judicial branch: *Supreme Court Chief Justice and associate justices, federal district court judges*
- Describe the major responsibilities of local, state, and federal government.
- Describe the structure of the federal government, including Congress and the cabinet.
- Describe the structure of state government and various forms of local government.
- Describe the powers/responsibilities and limits of power for government officials at the local, parish, state, and national levels.
- Identify qualifications and terms of office for key leaders/representatives at the federal, state, and local level.
- Explain how a bill becomes law at the federal or state level.
- Discuss the importance of the rule of law in the American constitutional system, for example:
  - establishing limits on those who govern and on the governed
  - protecting individual liberties and the rights of the accused
  - promoting social order and the common good
- List criteria for evaluating rules and laws.
- Examine a given law or court ruling and evaluate it on given criteria (for example, take and argue a position on the reasonableness of the decision in the *Dred Scott* case).
- Explain why taxes are needed and the purposes for which tax monies/revenues are used.
- Identify the likely source of public funding to address given needs.

- Identify types of taxes collected by the local, state, or federal government (for example, Social Security tax, federal/state income tax, sales tax, tariffs).
- Evaluate a type of tax in an historical context (for example, why England felt the Stamp Act and Tea Tax were necessary and why these taxes led to the American Revolution).

## B. Foundations of the American Political System

### Benchmarks Assessed

C-1B-M1	explaining the essential ideas and historical origins of American constitutional government
C-1B-M2	identifying and describing the historical experiences and the geographic, social, and economic factors that have helped to shape American political culture
C-1B-M3	explaining the meaning and importance of basic principles of American constitutional democracy as reflected in core documents
C-1B-M4	analyzing the ways in which political and social conflict can be peacefully resolved
C-1B-M5	analyzing democratic processes used to institute change
C-1B-M6	analyzing the importance of political parties, campaigns, and elections in the American political system

### Assessment Limits:

- Benchmarks C-1B-M4, C-1B-M5, and C-1B-M6 are particularly well suited for constructed-response items.

### Key Concepts:

- Identify the Magna Carta as a document that influenced the foundation of the American political system.
- Explain the major ideas in the Mayflower Compact.
- Identify problems the United States faced after the American Revolution that led to the writing of the U.S. Constitution.
- Compare and contrast the Articles of Confederation with the U.S. Constitution.
- Explain how the U.S. Constitution reflects certain principles of government, for example:
  - federal union*
  - respect for individual liberties*
  - popular sovereignty*
  - consent of the governed*
  - due process of law*
- Analyze how the separation of powers limits government.

- Explain how the system of checks and balances is used to prevent abuses of power.
- Explain the meaning and importance of ideas essential to American constitutional democracy (for example, basic freedoms) and analyze these ideas in core documents (for example, Declaration of Independence, Bill of Rights, or other major speeches/texts).
- Describe historical experiences and factors that defined, influenced, or helped to shape American political culture, for example:
  - colonization, American Revolution
  - Jeffersonian (*laissez-faire*) democracy
  - westward movement/migration
  - immigration, “melting pot”
  - Civil War, slavery
  - Great Depression
  - civil rights movements
- Identify the author or title of a significant historical document from an excerpt.
- Explain how changes are made in a democratic society, for example:
  - voting officials *into/out of office*
  - impeachment
  - petitions
  - amendments
  - court cases
- Describe, analyze, or compare/contrast various peaceful ways of resolving political or societal conflicts, including understanding the role of *majority vote* vs. *consensus*, for example:
  - voting
  - recall, impeachment
  - petitions
  - amendments
  - compromise
  - rallies, marches, strikes, sit-ins, boycotts, or other methods of civil disobedience
  - political parties, campaigns, and elections in the U.S. political system
- Contrast peaceful methods of instituting change with such alternatives as revolution or assassination.
- Analyze given events or experiences in U.S. history in terms of the methods used to institute change or resolve societal conflict, for example:
  - War of 1812
  - states’ rights theory
  - Jackson’s handling of the tariff controversy
  - Amendments 13, 14, 15
  - admission of new states to the Union
- Propose a peaceful way to resolve a political or societal conflict or to institute change, in terms of a given scenario.

- Describe the role of political parties in the American political system.
- Explain how political parties, campaigns, and elections provide opportunities for citizens to participate in government.
- Describe various kinds of elections (for example, president, senator, mayor).
- Describe the purpose and function of the Electoral College.
- Explain how the U.S. Census affects the reapportionment of congressional districts.

## C. International Relationships

### Benchmarks Assessed

C-1C-M1	describing how the world is organized politically and explaining the means by which nation-states interact
C-1C-M2	explaining the formation, implementation, and impact of U.S. foreign policy
C-1C-M3	identifying types of foreign policy issues, using current and historical examples

### Assessment Limits:

- Benchmark C-1C-M1 is assessed only with multiple-choice items.

### Key Concepts:

- Describe political divisions of the world in terms of the roles or common objectives of various alliances and international organizations (for example, NATO, SEATO, Warsaw Pact, the United Nations [UN], OPEC).
- Explain any of the various means by which nations interact, for example:
  - trade*
  - treaty (political, economic, military)*
  - diplomacy*
  - summit meetings*
  - embassies, ambassadors*
  - military conflict*
- Explain how U.S. foreign policy is formed and carried out, including the roles of the president, the Congress, and the secretary of state.
- Explain the terms *strategic interests* and *national security* with respect to the United States.
- Identify types of foreign policy issues with reference to current and historical examples (for example, Middle East conflicts).
- Describe the various means by which the United States attains its foreign policy objectives and protects its strategic interests, for example:
  - division of responsibilities for foreign affairs*

—*national security*  
—*peacekeeping*  
—*isolationism*  
—*imperialism*  
—*protectionism*  
—*neutrality*  
—*humanitarian, economic, or military aid*  
—*economic incentives/economic sanctions*  
—*warfare/armed conflicts*

- Identify the foreign policy issue addressed in given stimulus material, or characterize the means by which foreign policy is being handled.

D. Roles of the Citizen	
Benchmarks Assessed	
C-1D-M1	explaining the meaning of citizenship and the requirements of citizenship and naturalization in the United States
C-1D-M2	identifying the rights and responsibilities of citizens and explaining their importance to the individual and to society
C-1D-M3	discussing issues involving the rights and responsibilities of individuals in American society
C-1D-M4	describing the many ways by which citizens can organize, monitor, and help to shape politics and government at local, state, and national levels

**Assessment Limits:**

- Benchmark C-1D-M1 is assessed only with multiple-choice items.
- Benchmark C-1D-M5 (communicating the importance of knowledge to competent and responsible political participation and leadership) is not assessed on LEAP.
- For C-1D-M4, test items do not duplicate assessment of C-1B-M6 regarding the importance of political parties, campaigns, and elections as opportunities to participate in the American political system.
- Assessment of Civics category D at grade 8 builds on assessment of similar concepts in this category at grade 4.
- Test items in this category may include such stimulus material as excerpts from historic documents, laws, courts rulings, political speeches and essays, or political cartoons.

**Key Concepts:**

- Define the following terms as they relate to the roles of citizens in U.S. society:
  - citizenship*
  - residency*
  - resident aliens vs. nonresident aliens*
- Identify the qualifications or requirements for U.S. citizenship (for example, birth in the United States, birth to American parents abroad).
- Identify the means by which noncitizens may become U.S. citizens (for example, naturalization).
- Identify individual rights guaranteed by specific amendments to the U.S. Constitution.
- Explain the importance of various rights and responsibilities of citizenship to the individual or to society at large, for example:
  - holding public office*
  - voting*
  - paying taxes*
  - jury duty/trial witness*
  - military service*
  - obeying the law*
  - due process of law*
- Analyze issues involving rights and responsibilities of individuals in American society (for example, rights of individuals with disabilities, right to a speedy trial, responsibility to pay taxes), including issues presented in stimulus material.
- Interpret a political cartoon.
- Explain, discuss, or argue for or against an idea/issue/position presented in stimulus material related to the rights and responsibilities of citizenship.
- Describe ways by which citizens can organize, monitor, or influence government and politics at the local, state, and national levels, including:
  - organizing or participating in peaceful demonstrations, rallies, or marches*
  - voting in elections*
  - running for office*
  - political campaigning*
  - serving as a convention delegate*
  - writing to government representatives*
  - signing petitions*
  - joining political action committees (PACs)*
  - lobbying*
  - attending public hearings and meetings of governing bodies*
  - keeping informed on public issues*
- Examine the role of patriotism in the preservation of American constitutional democracy and identify ways in which citizens can demonstrate patriotism.

## Strand E: Economics

A. Fundamental Economic Concepts	
Benchmarks Assessed	
E-1A-M1	describing how the scarcity of resources necessitates decision making at both personal and societal levels
E-1A-M2	analyzing consequences of economic decisions in terms of additional benefits and additional costs
E-1A-M3	analyzing the consequences and opportunity cost of economic decisions
E-1A-M4	analyzing the role of specialization in the economic process
E-1A-M5	giving examples of how skills and knowledge increase productivity and career opportunities
E-1A-M6	describing the essential differences in the production and allocation of goods and services in traditional, command, and market systems
E-1A-M7	describing the various institutions, such as business firms and government agencies, that make up economic systems
E-1A-M8	differentiating among various forms of exchange and money

### Assessment Limits:

- Benchmark E-1A-M9 (using economic concepts to help explain historic and contemporary events and developments) is not assessed on grade 8 LEAP.
- E-1A-M5 is assessed on every test form (that is, tested in some way in every assessment cycle).
- E-1A-M7 and E-1A-M8 are assessed only by multiple-choice test items.
- Benchmarks E-1A-M1, E-1A-M2, E-1A-M3, and E-1A-M5 are particularly well suited for constructed-response items.

### Key Concepts:

- Explain the following fundamental economic concepts:
  - goods and services*
  - consumers and producers*
  - scarcity*
  - opportunity cost/trade-off*
- Analyze situations involving scarcity at the individual, group, or societal level to determine the need for choices or what is gained or lost by a decision.
- Analyze or compare economic decisions in terms of benefits and costs.

- Identify the four basic economic questions:
  - what to produce*
  - how to produce it*
  - how much to produce*
  - who gets what is produced*
- Analyze an economic choice to identify its consequences and its opportunity cost.
- Explain choices/trade-offs, costs, benefits, and opportunity costs related to developing a personal or family budget.
- Define specialization and explain the role of specialization in the economic process, for example:
  - the need for specialization when individuals consume a broader range of goods and services than they produce themselves*
  - the impact of division of labor and specialization on labor productivity*
- Cite examples of how skills and knowledge increase personal productivity and career opportunities.
- Identify the skills and knowledge that would enhance particular career prospects.
- Discuss the importance of technical training to meet the needs of Louisiana's businesses and industries.
- Characterize or analyze the use of productive resources in an economic system:
  - natural resources*
  - capital resources*
  - human resources*
- Describe how decisions about the production and allocation of goods and services are made in different economic systems, for example:
  - traditional system (largely determined by historical custom)*
  - command system (major decisions made by a central authority)*
  - market system (major decisions decentralized, made by businesses and households in keeping with their own self-interests)*
- Describe the institutions that make up economic systems:
  - banks*
  - government agencies*
  - large companies and small businesses*
  - individuals/households*
- Distinguish between different types of businesses, for example:
  - individual proprietorship*
  - partnership*
  - corporation*
  - cooperative*
- Identify the functions and characteristics of money.

- Distinguish between various forms of exchange and money, for example:
  - barter*
  - currency*
  - bank checks*
  - credit cards*
  - loans*

B. Individuals, Households, Businesses, and Governments	
Benchmarks Assessed	
E-1B-M1	explaining the role of supply and demand in a competitive market system
E-1B-M2	explaining the factors that affect the production and distribution of goods and services
E-1B-M3	explaining the difference between private and public goods and services
E-1B-M4	identifying the costs and benefits of government policies on competitive markets
E-1B-M5	identifying different types of taxes and user fees and predicting their consequences
E-1B-M6	determining the reasons for trade between nations, identifying costs and benefits, and recognizing the worldwide interdependence that results
E-1B-M7	describing historical and economic factors that have contributed to the development and growth of the national, state, and local economies

#### Assessment Limits:

- For E-1B-M6, test items do not assess *trade barriers* or *balance of payments*.
- For E-1B-M7, test items do not assess local economies (only national and state economies are assessed).
- Items that test E-1B-M7 do not assess understanding of measures of economic output, such as Gross Domestic Product (GDP). Such measures are assessed under E-1C-M1.
- Test items for E-1B-M5 do not duplicate assessment of benchmark C-1A-M10. These two benchmarks are not assessed on the same test form.
- E-1B-M4 and E-1B-M7 are particularly well suited for constructed-response items.

#### Key Concepts:

- Analyze the role of competition in affecting supply, demand, and price of products in a market structure.
- Analyze a diagram or situation demonstrating the principles of supply and demand.

- Describe the fundamental principles of supply and demand, for example:
  - that prices are measures of the relative scarcity of different products*
  - how a change in supply or demand affects a product's price:*
    - *as price goes up, quantity demanded decreases/quantity supplied increases*
    - *as price decreases, quantity demanded increases/quantity supplied decreases*
- Analyze the circular flow of goods and services and money payments from a diagram.
- Explain or analyze factors affecting production and allocation of goods and services, for example:
  - identify major inventions/technological advances that increased productivity*
  - explain economic risk, opportunity costs, and incentives (for example, profit) and the role these factors play in influencing investments or deciding what to produce*
- Distinguish between private goods and services and public goods and services.
- Identify the costs and benefits of a given government policy on a competitive market, for example:
  - regulation/deregulation*
  - trade agreement, embargo*
  - government borrowing/deficit spending*
  - taxation and tax exemptions*
  - redistribution of income*
  - minimum wage*
- Identify various types of taxes and user fees, for example:
  - Social Security tax*
  - income tax, sales tax, or property tax*
  - tariffs*
  - road tolls/user fees*
  - entrance fees to national parks*
- Explain reasons for trade between nations (for example, scarce resources, lower-cost imports, humanitarianism).
- Describe the impact of international trade between nations (for example, higher quality of living, increased competition, increased specialization, worldwide interdependence).
- Give examples of U.S. exports (for example, grain, clothing) and imports (for example, electronics, automobiles).
- Describe historical and economic factors influencing the economic growth and development of Louisiana and the nation (for example, mass production/assembly line, individual entrepreneurship, wars, Great Depression/government programs, oil boom or decline).

## C. The Economy As a Whole

### Benchmarks Assessed

E-1C-M1	explaining the meaning of economic indicators that help to describe economies
E-1C-M2	describing the influences of inflation, unemployment, and underemployment on different groups of people

### Assessment Limits:

- For E-1C-M1, items do not assess Gross National Product (GNP), as this measure is less commonly used than Gross Domestic Product (GDP).
- For E-1C-M2, *underemployment* is not assessed on grade 8 LEAP.
- Benchmark E-1C-M1 is assessed only by multiple-choice items.
- Benchmark E-1C-M2 is particularly well suited for a constructed-response item.

### Key Concepts:

- Define the meaning of various economic indicators, for example:
  - gross domestic product (GDP)*
  - consumer price index (CPI)*
  - stock market indices*
  - unemployment rate*
  - inflation*
  - per capita income*
  - currency/exchange rate*
  - (economic) output*
- Interpret the meaning of economic indicators used in a chart, graph, table, or news report.
- Analyze income distributions from a chart or graph (for example, in the United States vs. the third world).
- Define *inflation* and *unemployment* in terms of an economic system as a whole.
- Describe the impact of inflation or unemployment on different groups of people (for example, consumers, business owners, youth entering the labor market, unskilled vs. skilled workers).

## Strand H: History

### A. Historical Thinking Skills

#### Benchmarks Assessed

H-1A-M1	describing chronological relationships and patterns
H-1A-M2	demonstrating historical perspective through the political, social, and economic context in which an event or idea occurred
H-1A-M3	analyzing the impact that specific individuals, ideas, events, and decisions had on the course of history
H-1A-M4	analyzing historical data using primary and secondary sources
H-1A-M5	identifying issues and problems from the past and evaluating alternative courses of action

#### Assessment Limits:

- Benchmark H-1A-M6 (conducting research in efforts to answer historical questions) is not assessed on grade 8 LEAP.
- Test items requiring *knowledge* of U.S. and World History will be restricted to historical Eras 1–5 (those areas targeted for mastery by grade 8).
- Although these historical thinking skills in category A may be needed to answer a multiple-choice item, test items are usually keyed to a benchmark in one of the other History categories.
- H-1A-M2, H-1A-M3, and H-1A-M5 may be the principal focus of a constructed-response item. Stimulus material is provided for any such task.
- If a question applies chronological relationships and patterns to events in a specific historical era or to aspects of another strand (for example, to geographical changes over time), the question is keyed to the relevant benchmark rather than to H-1A-M1.
- If a question includes primary or secondary source material in order to assess a benchmark in a different History category, the question is keyed to the respective benchmark rather than to H-1A-E4.

#### Key Concepts:

- Design a timeline based on information in given stimulus material.
- Interpret data and information presented in a timeline.
- Chronologically organize major events and personalities in U.S. or Louisiana history.
- Demonstrate an understanding of elapsed time between and within historical time periods.

- Compare or contrast events or ideas from the past with events or ideas in the present, demonstrating awareness of differing political, social, or economic contexts.
- Explain change or continuity over time based on information in given stimulus material.
- Explain the point of view of an historical figure or group, drawing on given stimulus material, for example:
  - viewpoints of Acadians who left Nova Scotia to settle in Louisiana*
  - viewpoints of the abolitionists*
  - viewpoints of American Indian tribes during the Indian wars*
- Use information in a biographical sketch to analyze the political, social, or economic context of a past period in time.
- Interpret a political cartoon depicting the viewpoint/perspective of a significant figure or of a common citizen in a particular historical context.
- Compare or contrast the viewpoints of two figures from different historical times.
- Identify, explain, or analyze the causes, effects, or impact of a given historical event (for example, the American Revolution).
- Explain how a given historical figure influenced or changed the course of history.
- Interpret or analyze historical data in a map, table, or graph to illuminate historical factors or trends (including applying any necessary mathematical skills).
- Identify historical issues or problems and identify possible courses of action to address them.
- Evaluate alternative courses of action in terms of their positive and negative consequences.
- Evaluate key decisions made at critical turning points in history by assessing their implications and long-term consequences.
- Use primary sources to analyze historical data, for example:
  - documents core to U.S. democracy*
  - famous speeches and addresses*
  - journals/diaries*
  - autobiographies*
- Use secondary sources to analyze historical data, for example:
  - biographies*
  - encyclopedias, almanacs*
  - newspaper or magazine articles*
  - historical fiction*
- Distinguish between primary and secondary sources.
- Propose different solutions to past issues and problems.
- Analyze given source material to distinguish opinion or propaganda from fact.

## B. United States History

### Benchmarks Assessed

#### Era 1: Three Worlds Meet (Beginnings to 1620)

H-1B-M1 identifying and describing characteristics of societies in the Americas, western Europe, and western Africa that increasingly interacted after 1450

H-1B-M2 explaining the cultural, ecological, and economic results of early European exploration and colonization

#### Era 2: Colonization and Settlement (1565–1763)

H-1B-M3 describing the interactions among Native Americans, early Europeans, and Africans in the Americas

H-1B-M4 tracing the emergence of religious freedom and changing political institutions in the English colonies

H-1B-M5 analyzing the impact of European cultural, political, and economic ideas and institutions on life in the Americas

#### Era 3: Revolution and the New Nation (1754–1820s)

H-1B-M6 explaining the causes and course of the American Revolution and the reasons for the American victory

H-1B-M7 explaining the impact of the American Revolution on the politics, society, and economy of the new nation

H-1B-M8 relating the institutions and practice of government established during and after the American Revolution to the foundation of the American political system

#### Era 4: Expansion and Reform (1801–1861)

H-1B-M9 describing the territorial expansion of the United States and analyzing the effects on relations with Native Americans and external powers

H-1B-M10 analyzing the changes and regional tensions created by Jacksonian democracy, the industrial revolution, increasing immigration, the rapid expansion of slavery, and the westward movement

H-1B-M11 explaining and giving examples of the reform movements that occurred during the antebellum period and evaluating their impact on American society

#### Era 5: Civil War and Reconstruction (1850–1877)

H-1B-M12 describing the causes and course of the Civil War and examining the impact of the war on the American people

H-1B-M13 comparing and evaluating various reconstruction plans of the post–Civil War era

**Assessment Limits:**

- Test items assessing *knowledge* of U.S. History are limited to benchmarks listed above in Eras 1–5.
- For H-1B-M1, test items include an emphasis on the trade that connected the Americas, western Europe, and western Africa.

**Key Concepts:****Era 1: Three Worlds Meet (Beginnings to 1860)**

- Describe the triangular trade that connected the Americas, western Europe, and western Africa during this time period.
- Describe the origins of the West Africa–Europe trade connection.
- Trace or describe major early explorations and explorers, for example:
  - Leif Ericson*
  - Christopher Columbus*
  - Hernando de Soto*
  - Lewis and Clark*
  - Marquette and Joliet*
- Identify and describe patterns of change in indigenous societies in the Americas up to the arrival of the Europeans.
- Identify and describe patterns of change in western European societies during the age of exploration.
- Identify developments in West Africa during the period of early contact with Europeans.
- Compare and contrast Africans, Europeans, and Native Americans converging in the Western Hemisphere after 1492.
- Discuss the effects that Europeans had on the culture, ecology, and economy of the New World.
- Explain the course and consequences of the Columbian exchange.

**Era 2: Colonization and Settlement (1565–1763)**

- Describe the founding of the British, Spanish, and French colonies in the Americas.
- Explain the role of mercantilism in the colonization of the Americas.
- Explain the causes, course, and consequences of the French and Indian War.
- Describe the arrival of Africans in the European colonies in the 17th century and the increase in the importation of slaves in the 18th century.
- Explain societal differences caused by the immersion of Africans in the Americas.
- Describe the various religious groups in colonial America and the role of religion in colonial communities.

- Describe the evolution of religious freedom within the colonies (for example, Rhode Island colony, Maryland Toleration Act, separation of church and state).
- Describe the Great Awakening and its consequences (for example, missionary/humanitarian activities, founding of colleges, democratic spirit in religion).
- Describe reflections of European culture, politics, and institutions in American life.
- Explain why some colonists felt loyal to England due to their cultural, political, and economic ties to the mother land.
- Explain the emergence and development of political institutions in the English colonies.
- Describe the emergence of freedoms (for example, freedom of the press, religious toleration) in the English colonies.

#### Era 3: Revolution and the New Nation (1754–1820s)

- Explain the causes, course, and consequences of the American Revolutionary War, including the major battles.
- Compare and contrast the strategies and motivations of the Patriots, the Loyalists, and the British during the American Revolution.
- Identify key figures in the American Revolution, for example:
  - Benjamin Franklin*
  - Thomas Jefferson*
  - Samuel Adams*
  - George Washington*
  - John Hancock*
  - Benedict Arnold*
- Explain the formation of government and the economic and social impact occasioned by the American Revolution, including major ideas expressed in the Declaration of Independence.
- Describe the issues involved in the creation and ratification of the U.S. Constitution.
- Discuss the significance of the Bill of Rights and its specific guarantees.
- Describe major events and issues involving early presidencies (for example, federal period, Jeffersonian democracy, Era of Good Feeling).

#### Era 4: Expansion and Reform (1801–1861)

- Explain Napoleon's reasons for selling the Louisiana territory to the United States.
- Explain the causes, course, and consequences of the War of 1812.
- Explain President Madison's reason for declaring war in 1812, the sectional divisions over the war, and the consequences of American Indian alliance with the British.
- Describe provisions of the Monroe Doctrine and its influence on U.S. foreign relations.
- Describe the impact Andrew Jackson's presidency on the U.S. political system (for example, the spoils system).

- Explain westward movement of the United States, the changes it created, and its effects on relations with Native American Indians, including:
  - government policy toward American Indians during the early 1800s*
  - accommodation, revitalization, and resistance strategies of American Indians*
  - removal/resettlement of American Indian nations*
  - impact of the California gold rush*
- Explain Manifest Destiny and its economic, political, racial, and religious roots.
- Describe diplomatic and political developments that led to the resolution of conflicts with Britain, Spain, and Russia from 1815 to 1850.
- Identify the causes, course, and consequences of the Texas War for Independence and the Mexican-American War.
- Identify major technological developments related to land, water, and transportation and how they transformed the economy, created international markets, and affected the environment.
- Analyze national policies on a protective tariff, a national bank, federally funded improvements (for example, roads, canals, railroads), and education and prison reforms.
- Identify factors that caused rapid urbanization and growth of slavery (for example, invention of the cotton gin, opening of new lands in the South and West, the plantation system).
- Identify factors that caused new waves of immigration to the United States (for example, the expansion of the railroad system, the potato famine in Ireland, or the appeal of gold in California).
- Explain how rapid urbanization, immigration, and industrialization affected the social fabric of early-19th-century cities, for example:
  - how the factory system affected gender roles and the lives of men, women, and children*
  - how immigrants adapted to life in the United States; the impact of such groups as the Know-Nothings*
  - how African Americans resisted conditions of their enslavement*
- Describe fundamental beliefs of abolitionism.
- Compare the positions of those who favored gradual emancipation of slaves vs. those who favored immediate emancipation.
- Explain the importance of the Second Great Awakening, the ideas of its principal leaders, and how it affected public education, and the temperance, women's suffrage, and abolition movements.
- Describe women's contributions to the reform movement.

### Era 5: Civil War and Reconstruction (1850–1877)

- Describe the economic, social, and cultural differences between the North and South, and the impact of the *Dred Scott* decision on increasing tensions.
- Identify the causes, course, and consequences of the Civil War, including:
  - roles of women, American Indians, and African Americans on the home front and battle front in the Union and Confederacy*
  - human resources and tactical advantages of the Union and of the Confederacy*
  - impact of new military technology (for example, repeating rifles, ironclad ships) on the final outcome of the war*
  - human and material costs of the war in the North and in the South*
- Chart the secession of the Southern states and identify the reasons for secession.
- Explain the purpose, nature, and significance of Lincoln’s Emancipation Proclamation.
- Explain the significance of Abraham Lincoln’s Gettysburg Address.
- Describe and analyze provisions of the 13th, 14th, and 15th Amendments.
- Describe, compare, or evaluate various reconstruction plans of the post–Civil War South (for example, as proposed by Lincoln, Andrew Johnson, and congressional leaders).
- Explain the growing conflict between Andrew Johnson and Congress, and the reasons for and consequences of his impeachment and trial.
- Describe the impact of military reconstruction on the South.
- Explain how the presidential election of 1876 led to the Compromise of 1877 and brought about an end to Reconstruction in the South.

## C. World History

### **Benchmarks Assessed**

#### Era 1: The Beginnings of Society

H-1C-M1      describing the earliest human communities

H-1C-M2      explaining the emergence of agricultural societies around the world

#### Era 2: The Rise of Early Civilizations (4000–1000 B.C.)

H-1C-M3      identifying the major characteristics of early civilizations in Mesopotamia, Egypt, and the Indus valley

H-1C-M4      tracing the development and expansion of agricultural societies and the emergence of new states

H-1C-M5      analyzing the political, social, and cultural consequences of population movements and militarization in Europe and Asia

Era 3: Classical Traditions, Major Religions, and Giant Empires (1000 B.C.–A.D. 300)

H-1C-M6 discussing and giving examples of technological and cultural innovation and change

H-1C-M7 describing the classical civilizations and examining their interactions and influences

H-1C-M8 describing and comparing the emergence of major religions and large-scale empires in the Mediterranean basin, China, and India

Era 4: Expanding Zones of Exchange and Encounter (A.D. 300–1000)

H-1C-M9 tracing the expansion of major religions and cultural traditions and examining the impact on civilizations in Europe, Asia, and Africa

H-1C-M10 analyzing the political, social, and cultural developments and changes that resulted from the rise and fall of empires and kingdoms in Europe, Asia, Africa, and the Americas

Era 5: Intensified Hemispheric Interactions (A.D. 1000–1500)

H-1C-M11 analyzing the cultural and economic impact of the interregional system of communication and trade that developed among the peoples of Europe, Asia, and Africa

H-1C-M12 explaining the developments and events that led to the political, social, cultural, and economic transformation of Europe

H-1C-M13 describing the development and expansion of complex societies and empires in the Americas

**Assessment Limits:**

- Test items assessing *knowledge* of World History are limited to the benchmarks that address Eras 1–5 listed above.
- For H-1C-M11, test items emphasize trade of the period.
- The term *Middle Ages* is used in referring to the time period in H-IC-M1 and H-IC-M2.

**Key Concepts:**

Era 1: The Beginnings of Society

- Describe the Old Stone Age (for example, cave dwellers, nomads).
- Explain the characteristics of the New Stone Age, for example:
  - domestication*
  - cultivation*
  - specialization*
  - civilization*
- Describe features of the earliest communities.

- Explain how geographical features influenced development of early civilizations.
- Explain why agricultural societies developed from hunters and gatherers.

#### Era 2: The Rise of Early Civilization (4000–1000 B.C.)

- Describe and compare/contrast the major characteristics of early river valley civilizations:
  - Nile (Egyptian pyramids, hieroglyphics, irrigation methods)*
  - Tigris-Euphrates (Mesopotamia, Code of Hammurabi, ziggurats)*
  - Indus Valley (Harrapa, Mohenjo-Daro)*
  - Huang-He/Yellow River*
- Describe how the early river valley civilizations influenced the development of other cultures (cultural diffusion).
- Describe the development of agricultural societies and individual communities.
- Describe the development of written communication.

#### Era 3: Classical Traditions, Major Religions, and Giant Empires (1000 B.C.–A.D. 300)

- Describe or compare/contrast the major characteristics of the following civilizations:
  - Greek (Acropolis, columns, orators, writings, democracy, city-states, social class structure, Alexander the Great)*
  - Roman (alphabet, dome, arch, aqueducts and roads, republic, 12 Tables, Caesar, Pax Romana, Constantine)*
  - Byzantine (Justinian)*
  - Persian (Darius, barter economy, coins, Cyrus the Great, road system)*
  - Phoenicians (alphabet, shipping, manufacturing, and trade, purple dye)*
  - Chinese (dynasty, Great Wall, Silk Road/trade)*
- Identify the effects of migration and militarization on the politics/social fabric of Europe and Asia (for example, migration of the Hebrews, conquests of Alexander the Great).
- Explain the sharing of ideas, goods, services through trade between the Greek and Roman civilizations.
- Describe the absorption or reflection of Greek and Roman ideas into other cultures (through trade, warfare, art, etc.).
- Identify the major new religions and relate them to the empires that emerged in the Mediterranean basin, China, and India.
- Describe and compare/contrast the major religions in terms of leaders, key beliefs, holy texts/writings, and location, for example:
  - Judaism*
  - Christianity*
  - Islam*
  - Hinduism*
  - Buddhism*
  - Taoism, Confucianism*

#### Era 4: Expanding Zones of Exchange and Encounter (A.D. 300–1000)

- Trace, describe, or analyze the spread of major religions and cultural traditions.
- Identify the effect that the major religions have had on European, Asian, and African civilizations.
- Describe the changes and developments brought about by the emergence and collapse of major empires/kingdoms in Europe, Asia, Africa, and the Americas.
- Describe major events, key figures, and social structure of the Middle Ages, for example:
  - feudalism*
  - Crusades*
  - guild system*
  - Charlemagne*
  - Magna Carta*

#### Era 5: Intensified Hemispheric Interaction (A.D. 1000–1500)

- Identify effects of trade on the economic and cultural development of Europe, Africa, and Asia.
- Explain how communication among regions was accomplished.
- Explain the role, importance, and routes of major world explorers, for example:
  - Marco Polo*
  - Prince Henry the Navigator*
  - Christopher Columbus*
  - Francisco Pizarro*
  - Ferdinand Magellan*
  - Vasco da Gama*
  - Hernando Cortez*
- Explain how or why Europe changed politically, socially, culturally, or economically during the period of intensified hemispheric interactions.
- Describe the origins and expansion of ancient American empires and complex societies in the Americas, for example:
  - Maya*
  - Aztec*
  - Inca*

## D. Louisiana History

### Benchmarks Assessed

H-1D-M1	describing the contributions of people, events, movements, and ideas that have been significant in the history of Louisiana
H-1D-M2	tracing the development of the various governments that have been established in Louisiana throughout history
H-1D-M3	identifying and discussing the major conflicts in Louisiana's past
H-1D-M4	locating and describing Louisiana's geographic features and examining their impact on people past and present
H-1D-M5	tracing the development and growth of Louisiana's economy throughout its history
H-1D-M6	examining folklore and describing how cultural elements have shaped our state and local heritage

### Assessment Limits:

- For H-1D-M4, test items will not overlap assessment of Geography benchmarks G-1C-M4 or G-1C-M5.
- For H-1D-M5, test items will not overlap assessment of Economics benchmark E-1B-M7.
- H-1D-M1 and H-1D-M4 are particularly well suited for constructed-response items.

### Key Concepts:

- Describe major early explorers and explorations significant to Louisiana, for example:
  - de La Salle (René-Robert Cavelier)*
  - Hernando de Soto*
  - Marquette and Joliet*
  - Lewis and Clark*
  - Iberville (Pierre le Moyne)*
  - Bienville (Jean Baptiste le Moyne)*
- Describe early settlers in Louisiana (for example, American Indians, Acadians).
- Describe leaders who were influential in Louisiana's development, for example:
  - Bienville (Jean Baptiste le Moyne)*
  - Iberville (Pierre le Moyne)*
  - Bernardo de Gálvez*
  - William C. C. Claiborne*
  - General Benjamin Butler*
  - P. B. S. Pinchback*
  - Huey Long*

- Describe and explain the importance of major events and ideas in the development of Louisiana, for example:
  - Spanish/French control change*
  - Louisiana Purchase*
  - Napoleonic Code*
  - statehood*
  - secession*
  - Reconstruction*
  - Bourbon rule*
  - Jim Crow laws*
  - Plessy v. Ferguson*
  - Treaty of San Ildefonso*
- Describe the nature or causes of various migrations into or within Louisiana, for example:
  - the Acadians' migration to Louisiana to avoid swearing allegiance to Great Britain*
  - new settlers in Louisiana enticed by John Law's Mississippi scheme*
  - settlers who came from other southern states after statehood*
- Describe the contributions of ethnic groups significant in Louisiana history, for example:
  - French*
  - Spanish*
  - American Indians*
  - Africans*
- Describe various governments in Louisiana's history, for example:
  - French Superior Council*
  - Spanish Cabildo*
  - territorial*
  - republic*
  - Confederate*
  - constitutional*
- Describe major conflicts in context of Louisiana history, for example:
  - Natchez Indian wars*
  - Battle of New Orleans/War of 1812*
  - Civil War*
- Construct a timeline from given information about people, events, or ideas significant to the growth and development of Louisiana.
- Describe and analyze the impact of Louisiana's geographic features on historic events, settlement patterns, economic development, for example:
  - plains, pine flats, uplands prairies, terraces, Mt. Driskill*
  - marshes, bayous, waterways, delta, coastal wetlands*
  - Mississippi River, Red River, Atchafalaya River*
- Explain how Louisiana's natural resources have shaped its history (for example, petroleum).

- Trace Louisiana's economic development and growth towards economic diversity, for example:
  - agriculture (cotton, sugarcane)*
  - seafood*
  - fur trading*
  - oil, gas, timber*
  - tourism*
  - Port of New Orleans*
- Explain cultural elements that have shaped Louisiana's state heritage, for example:
  - voodoo, African/West Indies*
  - Evangeline/Longfellow*
  - Cajun/Creole cooking*
  - Cajun language*
  - Mardi Gras*
  - jazz, gospel, and zydeco music*
  - antebellum period*
  - American Indian heritage*
  - Poverty Point settlement*
  - French and Spanish architecture*

## Sample Test Items: Grade 8 Social Studies

### Multiple-Choice Items

Questions 1 through 24 are sample multiple-choice items, arranged by strand and benchmark. The items test students' ability to correctly answer questions in Geography, Civics, Economics, and History. Some items may assess Social Studies content knowledge, while others may assess the application of Social Studies skills or concepts.

#### Geography

**Benchmark G-1A-M1:** identifying and describing the characteristics, functions, and applications of various types of maps and other geographic representations, tools, and technologies

Use the map below to answer question 1.



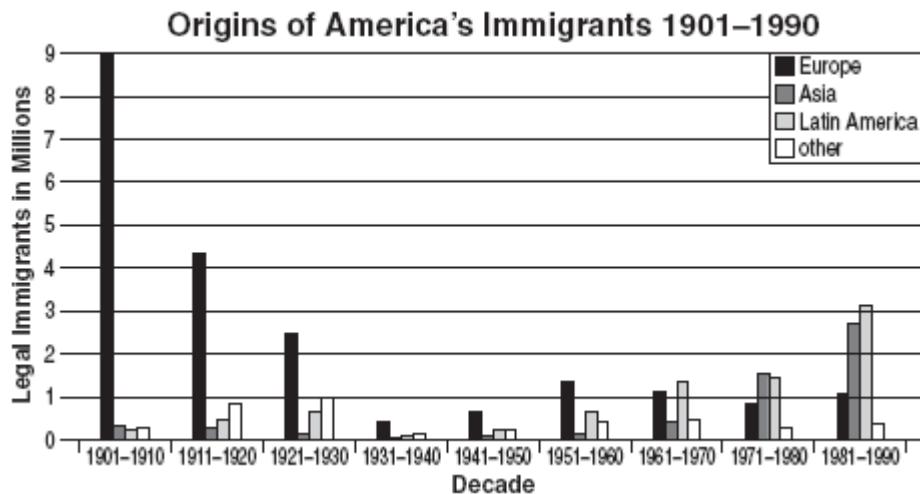
1. Which feature **must** be added to the Louisiana map to best understand the information it presents?
  - A. a legend
  - B. a distance scale
  - C. a compass rose
  - D. a date

**Correct response: A**

## Geography

**Benchmark G-1A-M2:** interpreting and developing maps, globes, graphs, charts, models, and databases to analyze spatial distributions and patterns

Use the bar graph below to answer question 2.



2. Which country is included in the group that had the greatest number of immigrants to the United States in the 1980s?

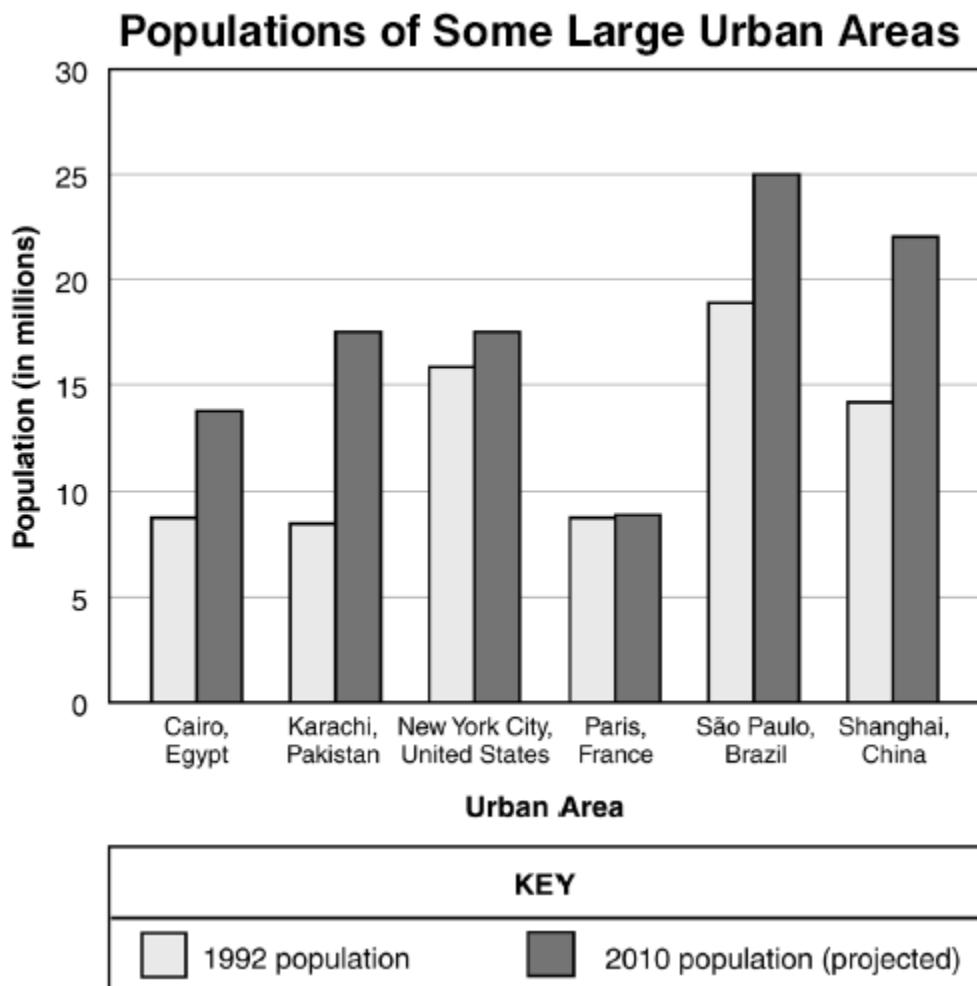
- A. Italy
- B. Venezuela
- C. Russia
- D. Thailand

**Correct response: B**

## Geography

**Benchmark G-1A-M2:** interpreting and developing maps, globes, graphs, charts, models, and databases to analyze spatial distributions and patterns

Use the bar graph below to answer question 3.



3. According to the graph, which of these cities will approximately double its population between 1992 and 2010?

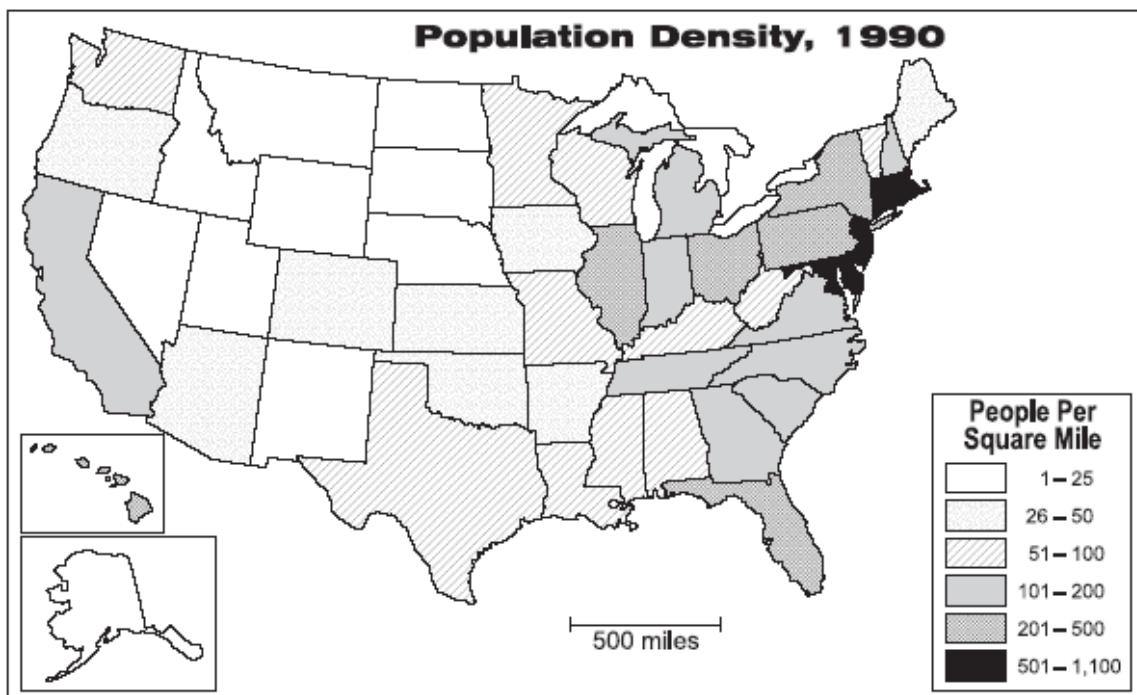
- Karachi, Pakistan
- New York City, United States
- Sao Paulo, Brazil
- Shanghai, China

**Correct response: A**

## Geography

**Benchmark G-1A-M2:** interpreting and developing maps, globes, graphs, charts, models, and databases to analyze spatial distributions and patterns

Use the map below to answer question 4.



4. According to the map, approximately how many people does Louisiana have per square mile?

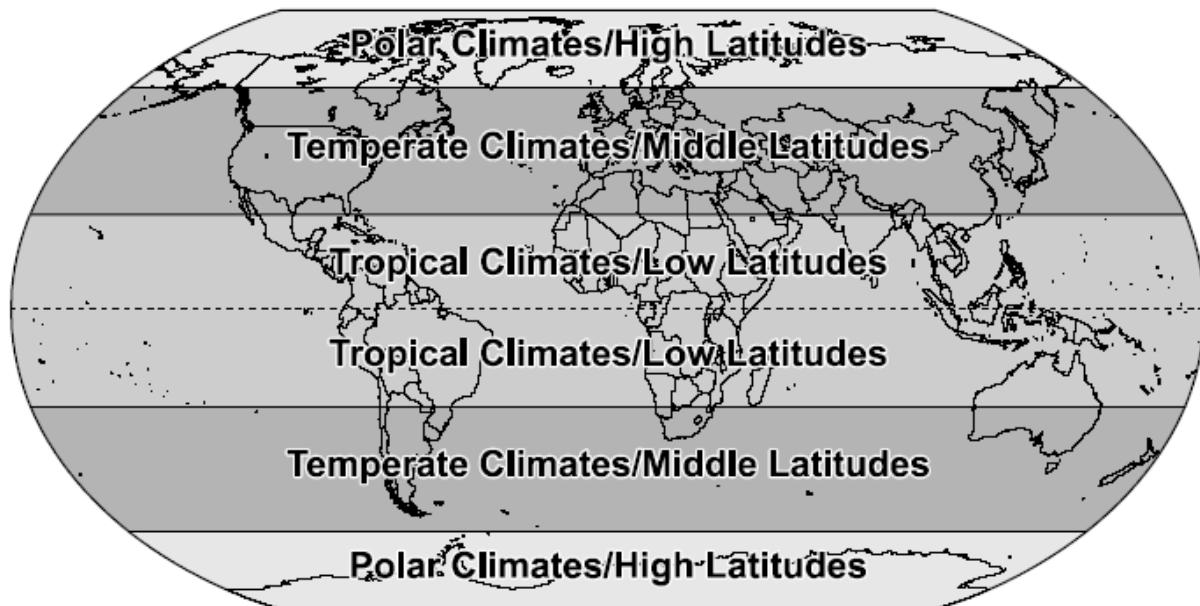
- A. 26–50
- B. 51–100
- C. 101–200
- D. 201–500

Correct response: B

## Geography

**Benchmark G-1B-M3:** identifying criteria used to define regions and explaining how and why regions change

Use the map below to answer question 5.



5. Which type of climate is found in Central America?

- A. high latitudes
- B. middle latitudes
- C. tropical climate
- D. temperate climate

**Correct response: C**

## Geography

**Benchmark G-1B-M3:** identifying criteria used to define regions and explaining how and why regions change

**Use the descriptions in the box below to answer question 6.**

- New England
- The Great Plains
- The Sunbelt
- The Great Northwest
- America's Breadbasket

6. All of the descriptions above refer to different

- A. neighborhoods.
- B. urban areas.
- C. regions.
- D. states.

**Correct response: C**

## Civics

**Benchmark C-1A-M5:** describing the organization and major responsibilities of local, state, and national governments

7. The United States has a federal form of government. Which of the following **best** supports this concept?

- A. There are two parts to the national legislature.
- B. There are ten items in the Bill of Rights.
- C. There are amendments to the U.S. Constitution.
- D. There are fifty state governments and one national government.

**Correct response: D**

## Civics

**Benchmark C-1B-M3:** explaining the meaning and importance of basic principles of American constitutional democracy as reflected in core documents

8. How can a judge ensure the right of a person to a fair trial?

- A. by selecting the first jurors who arrive at court
- B. by selecting jurors who are not biased about the case
- C. by selecting jurors who already have information about the case
- D. by selecting jurors who have enough time to hear the case

**Correct response: B**

## Civics

**Benchmark C-1B-M6:** analyzing the importance of political parties, campaigns, and elections in the American political system

9. It is said that the citizens of the United States elect the president. In reality, what body casts the official vote?

- A. the Supreme Court
- B. the Congress
- C. the Electoral College
- D. the Republican and Democratic Parties

**Correct response: C**

## Civics

**Benchmark C-1B-M6:** analyzing the importance of political parties, campaigns, and elections in the American political system

10. In 1998, California had 45 representatives in the U.S. House of Representatives while Louisiana had only seven. What accounts for the difference in these numbers?

- A. area of the states
- B. population of the states
- C. numbers of counties or parishes in the states
- D. wealth of the states

**Correct response: B**

## Civics

**Benchmark C-1D-M1:** explaining the meaning of citizenship and the requirements of citizenship and naturalization in the United States

11. A naturalized citizen of the United States is a person who

- was born in the United States or on United States soil.
- has legally become a United States citizen.
- was born abroad to parents who are United States citizens.
- has come to the United States to work permanently.

**Correct response: B**

## Civics

**Benchmark C-1D-M2:** identifying the rights and responsibilities of citizens and explaining their importance to the individual and to the society

12. Thomas Jefferson said, "If a nation expects to be ignorant and free . . . it expects what never was and never will be." What does this statement say about being a citizen?

- It is important to maintain secrecy about some government affairs.
- Citizen need to be informed about what their government is doing.
- Citizens do not need to participate in government.
- Government can exist without citizens taking part in it.

**Correct response: B**

## Economics

**Benchmark E-1B-M4:** identifying the costs and benefits of government policies on competitive markets

13. Historically, the oil industry has provided great economic benefits to individuals, businesses, and the state of Louisiana. What has been a major **economic cost** of this industry to the citizens of Louisiana?

- A. increased population
- B. air and water pollution
- C. better standard of living
- D. higher taxes

**Correct response: B**

## Economics

**Benchmark E-1B-M6:** determining the reasons for trade between nations, identifying cost and benefits, and recognizing the worldwide interdependence that results

14. If Congress raised the tariff on athletic shoes imported to the United States, which of the following statements would **most likely** be true?

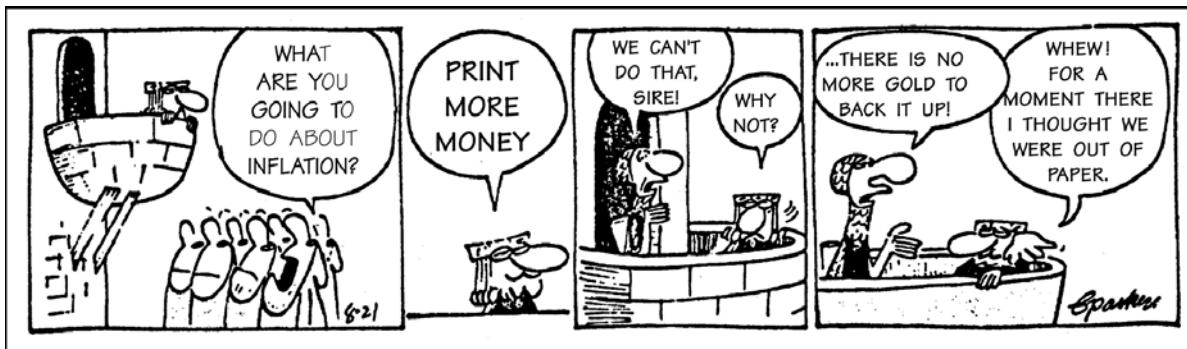
- A. American shoe manufacturers would go out of business.
- B. American workers would suffer a loss of income.
- C. Foreign workers would benefit directly from the tariff.
- D. People who purchase foreign athletic shoes would pay more for them.

**Correct response: D**

## Economics

**Benchmark E-1C-M1:** explaining the meaning of economic indicators that help to describe economies

**Use the political cartoon below to answer question 15.**



By permission of Johnny Hart and Creators Syndicate, Inc.

15. The people in the cartoon asking about inflation are concerned about an increase in

- A. taxes.
- B. prices.
- C. economic output.
- D. unemployment rates.

**Correct answer: B**

## Economics

**Benchmark E-1C-M1:** explaining the meaning of economic indicators that help to describe economies

16. When a news report says that the consumer price index (CPI) has risen, it means that the

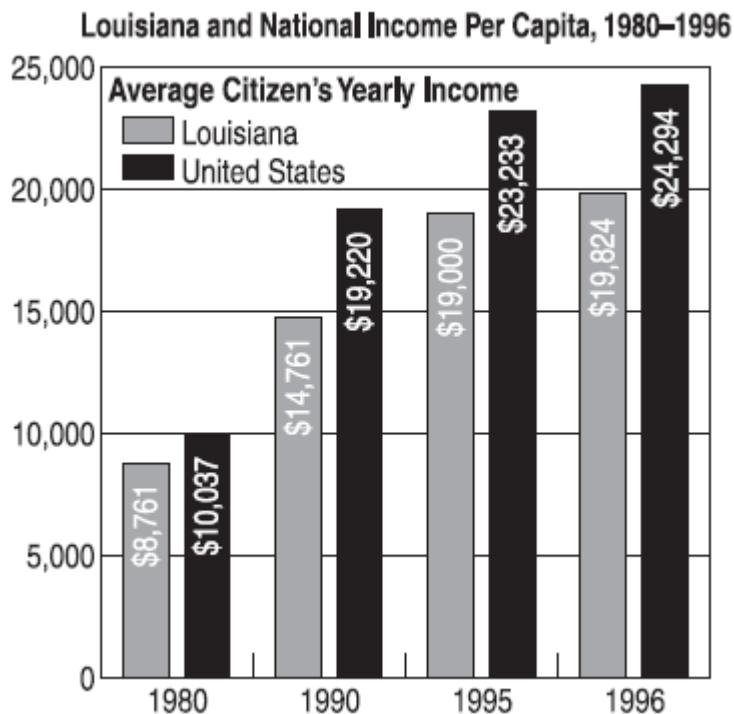
- A. stock market has experienced a profitable period.
- B. cost of many goods and services has increased.
- C. gross domestic product has decreased.
- D. economy has experienced deflation.

**Correct response: B**

## Economics

**Benchmark E-1C-M1:** explaining the meaning of economic indicators that help to describe economics

Use the graph below to answer question 17.



17. What conclusion can be made about the average Louisiana citizen's yearly income compared with the national average income?

- A. Louisiana has a higher percentage of retired people.
- B. Louisiana has fewer businesses per capita than the rest of the nation.
- C. Louisiana's average income is lower than the U.S. average.
- D. Louisiana has fewer unemployed people than the rest of the nation.

**Correct response: C**

## Economics

**Benchmark E-1C-M2:** describing the influences of inflation, unemployment, and underemployment on different groups of people

18. Newspapers have recently reported that some fast-food restaurants and other businesses have offered bonuses to new employees and are paying more than the minimum wage for entry-level work. What is the **most likely** cause of this situation?

- A. The businesses want to improve their reputations as a good place to work.
- B. The businesses are making large profits and want to share them with employees.
- C. The businesses are trying to cut their profit margins and pay lower taxes.
- D. The businesses cannot find workers because unemployment is low.

**Correct response: D**

## History

**Benchmark H-1B-M1:** identifying and describing characteristics of societies in the Americas, western Europe, and western Africa that increasingly interacted after 1450

19. Early explorations of the New World have often been described as “the meeting of three civilizations.” To what does this description refer?

- A. The Spanish, Portuguese, and French explorers all met in the New World.
- B. Three major European nations agreed to jointly explore the New World.
- C. The European, Native American, and African cultures came together in the New World.
- D. Three Central American cultures—Aztecs, Incas, and Mayans—joined together to defend their lands.

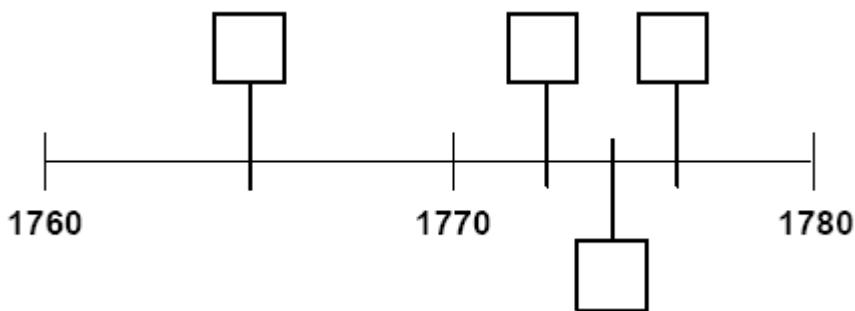
**Correct response: C**

## History

**Benchmark H-1B-M6:** explaining the causes and course of the American Revolution and the reasons for the American victory

**Put the number for each of the following events in the correct box on the timeline below to help answer question 20.**

1. The American Revolution began.
2. The British passed the Stamp Act in 1765.
3. The colonies signed the Declaration of Independence.
4. The colonists protested against British laws by throwing tea into Boston Harbor.



**20.** Which answer below lists the four events in the correct chronological order?

- A. 2, 3, 1, 4
- B. 2, 4, 1, 3
- C. 2, 1, 4, 3
- D. 2, 1, 3, 4

**Correct response: B**

## History

**Benchmark H-1B-M13:** comparing and evaluating various reconstruction plans of the post–Civil War era

**Use the slogan below to answer question 21.**

“Forty acres and a mule!”

21. The Civil War caused many changes in America. As the conflict was ending, many people had ideas about how to help various people who were affected by the war. The slogan above refers to helping which group?

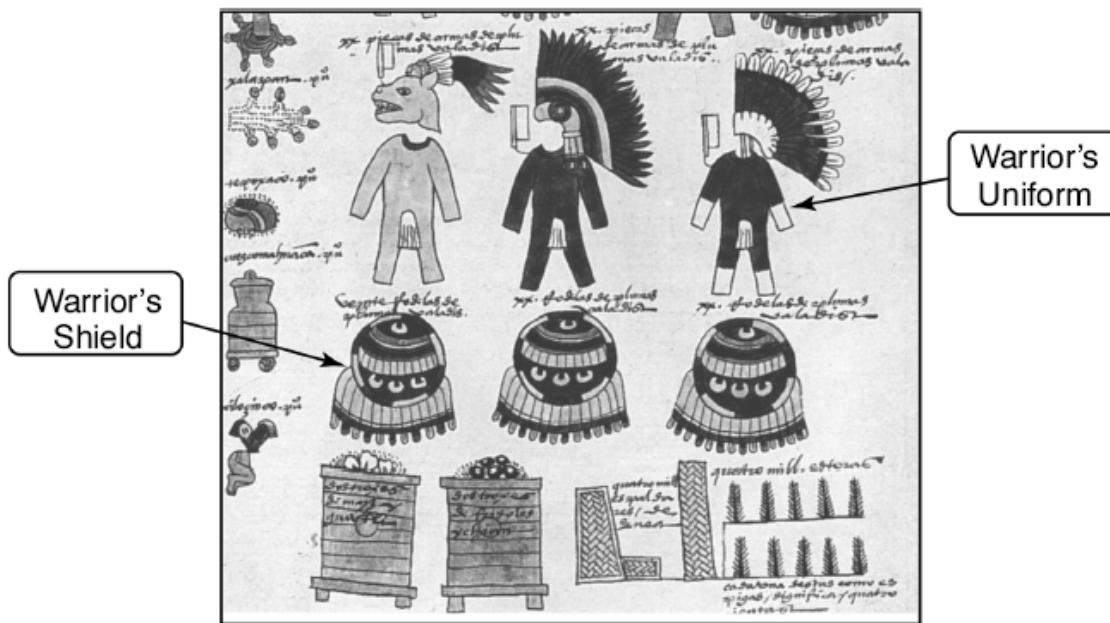
- A. politicians
- B. former slaves
- C. carpetbaggers
- D. former slave owners

**Correct response: B**

## History

**Benchmark H-1C-M13:** describing the development and expansion of complex societies and empires in the Americas

Use the picture and the information below to answer question 22.



22. This drawing shows some goods given as tribute payment to an Aztec king by a conquered state. Other tributes included blankets, gold, jade, and large reserves of food. Many of these items were provided to the Aztec army, while others were distributed to Aztec priests and nobles.

The information suggests that the Aztecs gained control of the people who provided the goods by

- A. attacking them militarily.
- B. restricting their trade routes.
- C. bribing their leaders.
- D. influencing their religious beliefs.

**Correct response: A**

## History

**Benchmark H-1D-M3:** identifying and discussing the major conflict in Louisiana's past

**Read the poem below to answer question 23.**

### One-Way Ticket

I am fed up  
With Jim Crow laws.  
People who are cruel  
And afraid...

I pick up my life  
And take it away  
On a one-way ticket—  
Gone up North,  
Gone out West, Gone!

—Langston Hughes, 1948

**23.** What was the purpose of the “Jim Crow laws” referred to in the poem?

- A. to guarantee suffrage to African Americans
- B. to enforce segregation and discrimination
- C. to regulate the policies of Reconstruction
- D. to provide land for freed slaves after the Civil War

**Correct response: B**

## History

**Benchmark H-1D-M6:** examining folklore and describing how cultural elements have shaped our state and local heritage

**24.** The Native Americans of the Poverty Point culture are known for having built earthen mounds. Archaeologists believe these mounds were used for

- A. homes for all of the tribe's families.
- B. protection from enemies.
- C. farming purposes.
- D. trading centers and religious gatherings.

**Correct response: D**

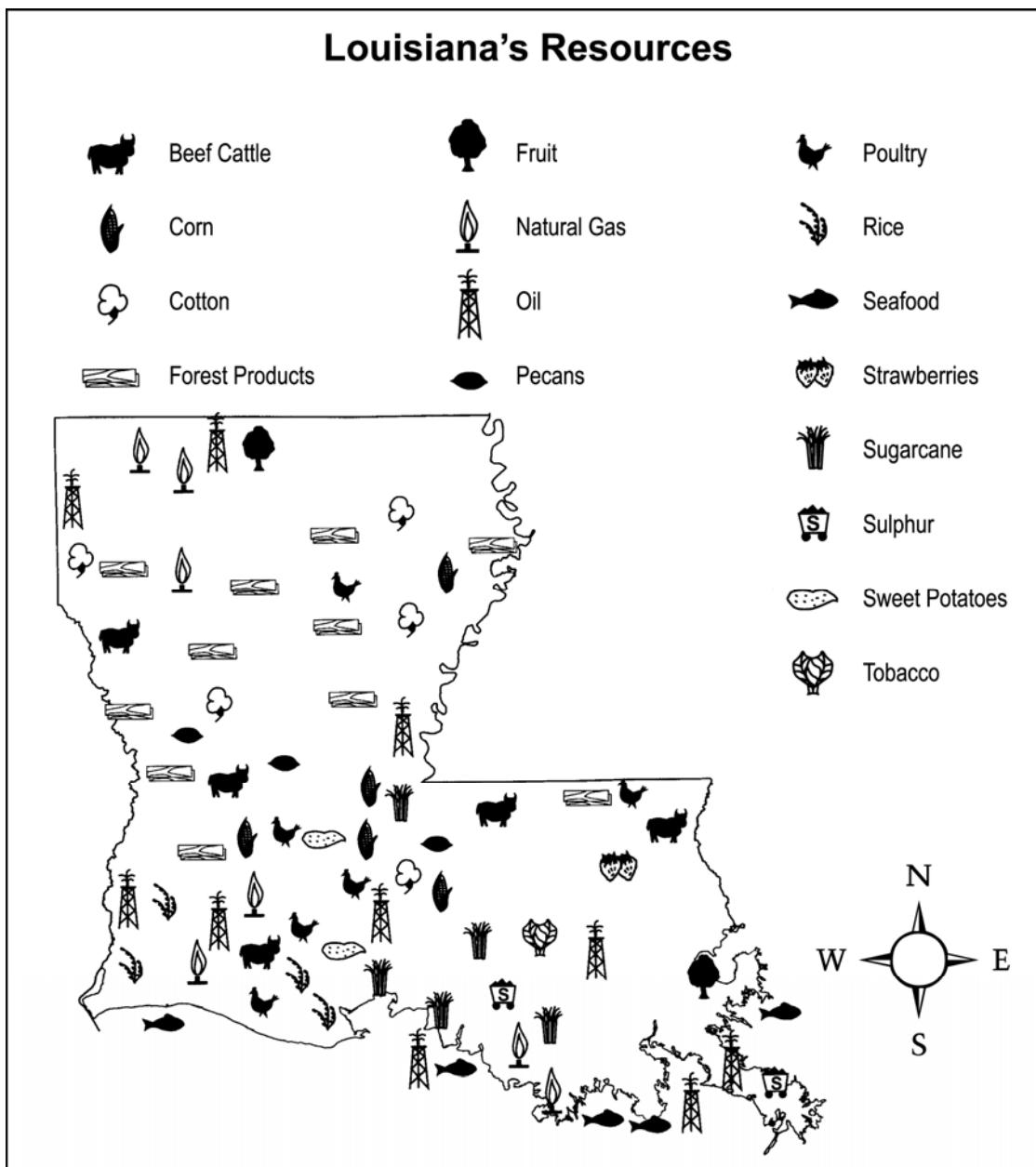
## Sample Constructed-Response Items

Questions 25 through 28 are sample constructed-response items. Each item contains multiple parts and involves the application of Social Studies knowledge, skills, and/or concepts. The constructed-response items are scored using an item-specific rubric on a scale of 0 to 4.

### Geography

**Benchmark G-1A-M2:** interpreting and developing maps, globes, graphs, charts, models, and databases to analyze spatial distributions and patterns

Use the map below to answer question 25.



25. A. Choose **two** of the resources from the map on page 4-55 that are important to Louisiana's economy and write them in the space below.

B. For each resource you listed, explain the geographic factors that make it possible for the resource to be produced or collected.

C. Identify **one** nonrenewable resource from the chart.

D. What can Louisiana do to preserve its nonrenewable resources?

**Scoring Rubric:**

Score	Description
<b>4</b>	The student's response: <ul style="list-style-type: none"> <li>• accurately identifies <b>two</b> resources from the map in part A,</li> <li>• thoroughly explains <b>two</b> geographic factors that make the production of these natural resources possible in part B,</li> <li>• correctly identifies <b>one</b> nonrenewable resource in part C, <i>and</i></li> <li>• correctly states a way in which nonrenewable resources in Louisiana can be preserved in part D.</li> </ul>
<b>3</b>	The student's response correctly answers three parts of the question.
<b>2</b>	The student's response correctly answers two parts of the question.
<b>1</b>	The student's response correctly answers one part of the question.
<b>0</b>	The student's response is incorrect, irrelevant to the skill/concept being measured, too brief to evaluate, or blank.

**Scoring Notes:**

*Maximum points to be awarded per section:*

Part A—No points awarded for this section, but it must be completed in order to get a total score point of 4. Also, if the student does not answer part A but identifies the resources in part B, the maximum total the student can receive shall be a score point of 3 if all of the other parts are correct.

Part B—2 points

Part C—1 point

Part D—1 point

**Possible responses (not inclusive):**

*Part B:* Geographic factors include location, climate (temperature, precipitation), landforms, and bodies of water.

*Part C:* Nonrenewable resources from the chart include natural gas, oil, salt, and sulfur.

*Part D:* Any reasonable answer dealing with conservation or preservation

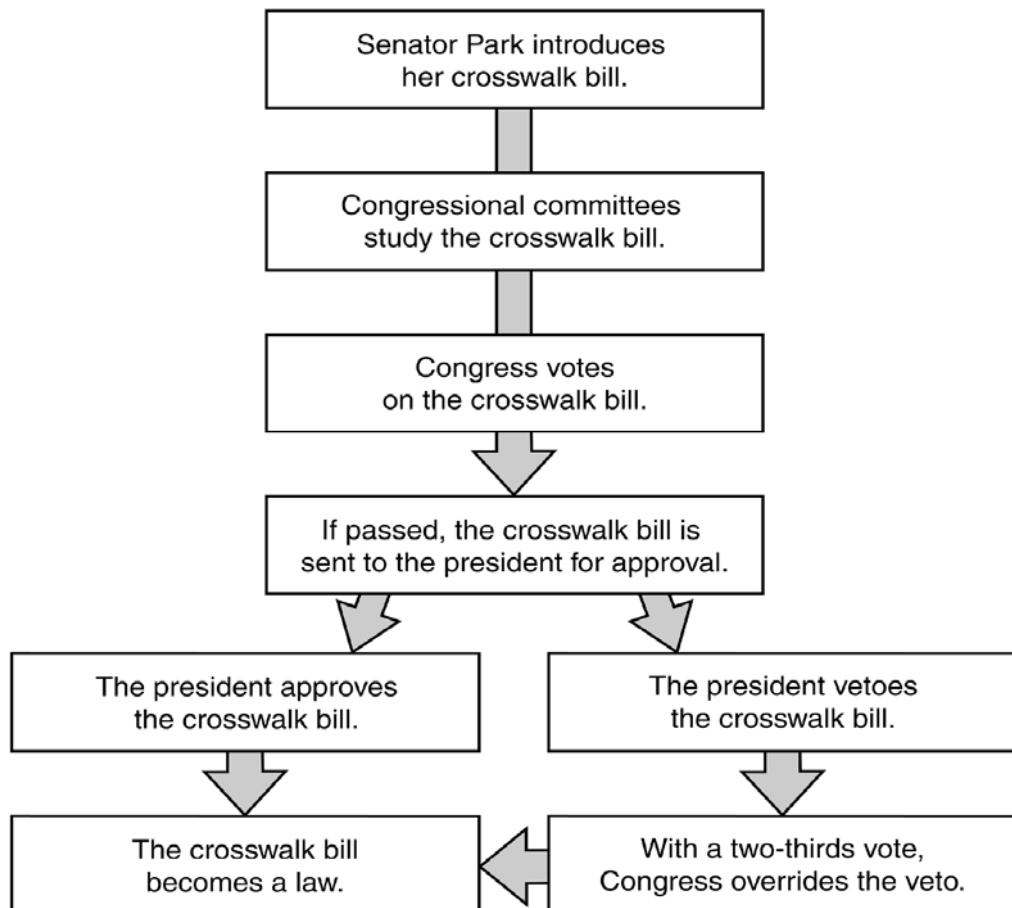
## Civics

**Benchmark C-1B-M3:** explaining the meaning and importance of basic principles of the American constitutional democracy as reflected in core documents

Use the information and diagram below to answer question 26.



United States Senator Joan Park wrote a bill that would require cities to paint corner crosswalks within one hundred yards of all schools. The chart below shows how the bill could become a federal law.



26. A. Explain how the principle of separation of powers **and** the principle of checks and balances are illustrated in the steps in the diagram above.

B. Name **one** way citizens can become involved in the process of a bill becoming a law.

C. The Supreme Court can become involved with laws after they are passed. Fully explain the role of the Supreme Court concerning laws.

**Scoring Rubric:**

Part A of this task may receive a maximum of 2 points; parts B and C may receive a maximum of 1 point each.

Score	Description
<b>4</b>	The student's response: <ul style="list-style-type: none"> <li>• accurately explains how the principles of separation of powers <u>and</u> checks and balances are illustrated in the diagram in part A (2 pts.),</li> <li>• correctly names <b>one</b> way citizens can become involved in the process of a bill becoming a law in part B (1 pt.), <i>and</i></li> <li>• explains the role the Supreme Court concerning laws in part C (1 pt.).</li> </ul>
<b>3</b>	The student's response provides a total of three complete answers in parts A, B, <b>AND/OR C</b> .
<b>2</b>	The student's response provides a total of two complete answers in parts A, B, <b>AND/OR C</b> .
<b>1</b>	The student's response provides a total of one complete answer in parts A, B, <b>OR C</b> .
<b>0</b>	The student's response is incorrect, irrelevant to the skill/concept being measured, too brief to evaluate, or blank.

**Scoring Information (not inclusive):**

*Part A:*

Separation of powers:

- role of the legislature (Congress, Senate, House of Representatives) to write and pass laws and role of executive branch (president) to pass or veto laws

Checks and balances:

- The president must approve a bill passed by Congress before it can become law.
- The president may veto a bill passed by Congress.
- The Congress can override a presidential veto.
- Bills must be initiated by Congress, not the president.

*Part B:*

- elect representatives
- provide input during the process
- serve as experts/witnesses
- provide impetus for the writing/passage of a bill
- write or call your representative
- lobby elected officials

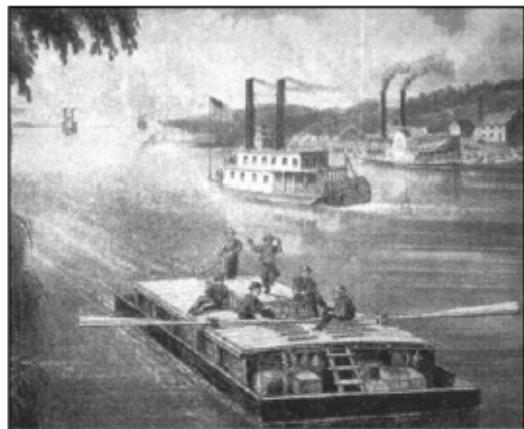
*Part C:*

- role of the Supreme Court is to determine whether laws are constitutional
- role of the Supreme Court is to interpret the law

## Economics

**Benchmark E-1B-M2:** explaining the factors that affect the production and distribution of goods and services

Use the pictures below to answer question 27.



27. A. In the mid-1800s, goods were delivered by barge and train. Identify and describe an economic advantage of each type of transportation method.

**Barge:**

**Train:**

B. You are a railroad builder in the 1800s. Identify and describe one economic factor you would consider when deciding where to build a railroad.

C. Describe one way the invention of the steamboat increased the economic activity of river states in the 1800s.

**Scoring Rubric:**

Score	Description
<b>4</b>	The student's response: <ul style="list-style-type: none"><li>identifies and describes economic advantages of <b>both</b> the barge and the train transportation methods in part A (2 pts.),</li><li>identifies and describes <b>one</b> economic factor a railroad builder in the 1800s would consider when deciding where to build a railroad in part B (1pt.), <i>and</i></li><li>describes <b>one</b> way the invention of the steamboat increased the economic activity of river states in the 1800s in part C (1 pt.).</li></ul>
<b>3</b>	The student's response provides a total of three complete answers in parts A, B, <b>and/or</b> C.
<b>2</b>	The student's response provides a total of two complete answers in parts A, B, <b>and/or</b> C.
<b>1</b>	The student's response provides one complete answer in either part A, B, <b>or</b> C.
<b>0</b>	The student's response is incorrect, irrelevant to the skill/concept being measured, too brief to evaluate, or blank.

**Scoring notes:**

Maximum points to be awarded per section: part A—2 points, part B—1 point part C—1 point

**Key elements of possible responses (not inclusive):***Part A:*Barge

- cheaper to operate/self-propelled/no fuel costs
- cheaper to build
- cheaper freight rates for shippers

Train

- could deliver more goods at once
- could transport people/passengers
- could deliver to towns not located on a river
- could deliver goods faster
- could charge more for transport of goods and people, as it was more direct/fast and sometimes more luxurious

*Part B:*

- whether or not a particular railroad route would attract enough passengers and freight to recoup the investment (which includes paying railroad builders, maintenance workers, and train operators, and paying for building materials and fuel)
- the proximity of the railroad to competing railroads/other forms of transportation
- the proximity of railroad lines to fuel sources/coal mines
- the proximity of the railroad to towns/cities
- the possibility that a state would impose local track-size requirements that could make the construction of interstate railroad webs difficult
- cost of building railroads across particular terrains

*Part C:*

- transported more goods and people between river cities
- allowed for easier transportation of goods and people upstream
- increased need for services (hotels, stores) in river cities
- allowed for easier import/export of goods
- traveled faster

## History

**Benchmark H-1B-M9:** describing the territorial expansion of the United States and analyzing the effects on relations with Native Americans and external powers

**Use the quotation below to answer question 28.**

"I am tired of fighting. Our Chiefs are killed. . . . It is cold, and we have no blankets. . . . My people, some of them, have run away to the hills, and have no blankets, no food. . . . Hear me, my Chiefs! I am tired; my heart is sick and sad. From where the sun now stands I will fight no more forever."

—Chief Joseph, 1877

28. A. Explain the situation Native American Indians faced in the 1870s when Chief Joseph spoke these words.

B. At the time Chief Joseph spoke these words, a popular belief of Manifest Destiny influenced the actions of U.S. government. What was this belief?

C. Explain **two** effects Chief Joseph's actions had on the United States.

### Scoring Rubric:

Score	Description
4	The student's response: <ul style="list-style-type: none"><li>• accurately explains the situation of the Native American Indians in part A,</li><li>• correctly identifies Manifest Destiny in part B, and</li><li>• explains <b>two</b> effects of Chief Joseph's actions in part C.</li></ul>
3	The student's response correctly answers three parts of the question.
2	The student's response correctly answers one part of the question.
1	The student's response correctly answers one part of the question.
0	The student's response is incorrect, irrelevant to the skill/concept being measured, too brief to evaluate, or blank.

### Scoring notes:

Maximum points to be awarded per section: part A—1 point, part B—1 point, and part C—2 points.

**Possible responses (not inclusive):**

*Part A:*

He was describing the defeat of his people and surrendering to the United States, which took over Native Americans' land.

*Part B:*

Manifest Destiny was the name of the belief that the United States should spread from the Atlantic Ocean to the Pacific Ocean.

*Part C:*

The United States would not likely be engaged in future warfare with Chief Joseph's people. The United States would have sole ownership of the land where Native Americans once lived. The United States would get the economic benefit of having access to the resources found on the land.

## Standards and Benchmarks, across Grades

### GEOGRAPHY: Physical and Cultural Systems

#### A. THE WORLD IN SPATIAL TERMS

K–4	5–8	9–12
<b>G-1A-E1</b> identifying and describing the characteristics and uses of geographic representations, such as various types of maps, globes, graphs, diagrams, photographs, and satellite-produced images	<b>G-1A-M1</b> identifying and describing the characteristics, functions, and applications of various types of maps and other geographic representations, tools, and technologies  <b>G-1A-M2</b> interpreting and developing maps, globes, graphs, charts, models, and databases to analyze spatial distributions and patterns	<b>G-1A-H1</b> using geographic representations, tools, and technologies to explain, analyze, and solve geographic problems
<b>G-1A-E2</b> locating and interpreting geographic features and places on maps and globes  <b>G-1A-E3</b> constructing maps, graphs, charts, and diagrams to describe geographical information and to solve problems	<b>G-1A-M3</b> organizing and displaying information about the location of geographic features and places by using mental mapping skills	<b>G-1A-H2</b> organizing geographic information and answering complex questions by formulating mental maps of places and regions

## GEOGRAPHY: Physical and Cultural Systems

### B. PLACES AND REGIONS

K–4	5–8	9–12
<b>G-1B-E1</b> describing and comparing the physical characteristics of places, including land forms, bodies of water, soils, vegetation, and climate	<b>G-1B-M1</b> explaining and analyzing both the physical and human phenomena associated with specific places, including precipitation and settlement patterns	<b>G-1B-H1</b> determining how location and social, cultural, and economic processes affect the features and significance of places
<b>G-1B-E2</b> identifying and describing the human characteristics of places, including population distributions and culture		
<b>G-1B-E3</b> describing how the physical and human characteristics of places change over time	<b>G-1B-M2</b> identifying and describing significant physical features that have influenced historical events	<b>G-1B-H2</b> analyzing the ways in which physical and human characteristics of places and regions have affected historic events
<b>G-1B-E4</b> defining and differentiating regions by using physical characteristics, such as climate and landforms, and by using human characteristics, such as economic activity and language	<b>G-1B-M3</b> identifying criteria used to define regions and explaining how and why regions change	<b>G-1B-H3</b> analyzing the various ways in which physical and human regions are structured and interconnected
	<b>G-1B-M4</b> describing and explaining how personal interests, culture, and technology affect people's perceptions and uses of places and regions	<b>G-1B-H4</b> explaining and evaluating the regions to cultural identity

## GEOGRAPHY: Physical and Cultural Systems

### C. PHYSICAL AND HUMAN SYSTEMS

K-4	5-8	9-12
<b>G-1C-E1</b> describing how physical processes help to shape features and patterns on Earth's surface	<b>G-1C-M1</b> predicting and explaining how physical features help to shape patterns and arrangements in the physical environment	<b>G-1C-H1</b> analyzing the ways in which Earth's dynamic and interactive physical processes affect different regions of the world
<b>G-1C-E2</b> describing and comparing the types of settlement and patterns of land use in local communities, the United States, and world regions	<b>G-1C-M2</b> identifying key demographic concepts and using these concepts to analyze the population characteristics of a country or region  <b>G-1C-M3</b> describing the characteristics and patterns of human settlement in different regions of the world and analyzing the impact of urbanization	<b>G-1C-H2</b> determining the economic, political, and social factors that contribute to human migration and settlement patterns and evaluating their impact on physical and human systems
<b>G-1C-E3</b> describing and explaining the characteristics, distribution, and migration of human population	<b>G-1C-M4</b> analyzing types, patterns, and effects of human migration over time	<b>G-1C-H3</b> analyzing trends in world population numbers and patterns and predicting their consequences
<b>G-1C-E4</b> identifying and comparing the cultural characteristics of different regions and people	<b>G-1C-M5</b> tracing local and worldwide patterns of cultural diffusion and analyzing their causes and effects	<b>G-1C-H4</b> analyzing the characteristics, distribution, and interrelationships of the world's cultures
<b>G-1C-E5</b> locating and explaining the spatial distribution of economic activities	<b>G-1C-M6</b> comparing historical and contemporary patterns of economic interdependence	<b>G-1C-H5</b> describing and evaluating spatial distribution of economic systems and how economic systems affect regions
<b>G-1C-E6</b> identifying and describing types of territorial units, such as parishes or counties, states, and countries	<b>G-1C-M7</b> explaining how cooperation and conflict among people contribute to the political divisions on Earth's surface	<b>G-1C-H6</b> analyzing how cooperation, conflict, and self-interests impact social, political, and economic entities on Earth

## GEOGRAPHY: Physical and Cultural Systems

### D. ENVIRONMENT AND SOCIETY

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<b>G-1D-E1</b> identifying and explaining ways in which people depend upon and modify the physical environment	<b>G-1D-M1</b> analyzing and evaluating the effects of human actions upon the physical environment	<b>G-1D-H1</b> describing and evaluating the ways in which technology has expanded the human capability to modify the physical environment
<b>G-1D-E2</b> describing how humans adapt to variations in the physical environment  <b>G-1D-E3</b> describing the locations, causes, and effects of natural disasters on the environment and society	<b>G-1D-M2</b> explaining and giving examples of how characteristics of different physical environments affect human activities	<b>G-1D-H2</b> examining the challenges placed on human systems by the physical environment and formulating strategies to deal with these challenges
<b>G-1D-E4</b> describing the use, distribution, and importance of natural resources	<b>G-1D-M3</b> analyzing the worldwide distribution and utilization of natural resources	<b>G-1D-H3</b> analyzing the relationship between natural resources and the exploration, colonization, settlement, and uses of land of different regions of the world  <b>G-1D-H4</b> evaluating policies and programs related to the use of natural resources
	<b>G-1D-M4</b> identifying problems that relate to contemporary geographic issues and researching possible solutions	<b>G-1D-H5</b> developing plans to solve local and regional geographic problems related to contemporary issues

## CIVICS: Citizenship and Government

### A. STRUCTURE AND PURPOSES OF GOVERNMENT

K-4	5-8	9-12
<b>C-1A-E1</b> describing government in terms of the people and groups who make, apply, and enforce rules and laws in the home, school, community, and nation  <b>C-1A-E2</b> explaining the necessity and basic purposes of government	<b>C-1A-M1</b> explaining major ideas about why governments are necessary and evaluating competing positions on the purposes government should serve	<b>C-1A-H1</b> analyzing the necessity and purposes of politics and government and identifying examples of programs that fit within those purposes
<b>C-1A-E3</b> comparing limited governments to unlimited governments	<b>C-1A-M2</b> describing the essential characteristics of various systems of government	<b>C-1A-H2</b> comparing and evaluating the essential characteristics of various systems of government and identifying historical and contemporary examples of each
	<b>C-1A-M3</b> explaining how the powers of the government are distributed, shared, and limited by the United States and Louisiana constitutions  <b>C-1A-M4</b> explaining the purposes of state constitutions and describing the relationship of state constitutions to the federal constitution	<b>C-1A-H3</b> explaining and evaluating issues related to the distribution of powers and responsibilities within the federal system
<b>C-1A-E4</b> identifying and describing some of the major responsibilities of local, state, and national governments	<b>C-1A-M5</b> describing the organization and major responsibilities of local, state, and national governments	<b>C-1A-H4</b> explaining the organization and functions of local, state, and national governments and evaluating their relationships
<b>C-1A-E5</b> identifying key members of government at the local, state, and national levels and describing their powers and the limits on their powers  <b>C-1A-E6</b> explaining how officials in government acquire the authority to exercise political power	<b>C-1A-M6</b> identifying government leaders and representatives at the local, state, and national levels and explaining their powers and the limits on their powers	

<b>C-1A-E7</b> explaining the purposes and importance of rules and laws	<b>C-1A-M7</b> explaining the importance of law in the American constitutional system and applying criteria to evaluate rules and laws	<b>C-1A-H5</b> evaluating the role and importance of law in the American political system and applying criteria to evaluate laws
	<b>C-1A-M8</b> explaining how public policy is formed, debated, and carried out at local, state, and national levels  <b>C-1A-M9</b> explaining the necessity of taxes and describing the purposes for which tax revenues are used  <b>C-1A-M10</b> identifying and evaluating different types of taxes	<b>C-1A-H6</b> examining the major responsibilities of the national government for domestic and foreign policy  <b>C-1A-H7</b> explaining how government is financed through taxation

## CIVICS: Citizenship and Government

### B. FOUNDATIONS OF THE AMERICAN POLITICAL SYSTEM

K–4	5–8	9–12
	<p><b>C-1B-M1</b> explaining the essential ideas and historical origins of American constitutional government</p> <p><b>C-1B-M2</b> identifying and describing the historical experiences and the geographic, social, and economic factors that have helped to shape American political culture</p>	<p><b>C-1B-H1</b> analyzing the central ideas and historical origins of American constitutional government and evaluating how this form of government has helped to shape American society</p>
<p><b>C-1B-E1</b> identifying basic principles of American constitutional democracy and explaining how the constitutions of the United States and Louisiana reflect these principles</p> <p><b>C-1B-E2</b> discussing the importance of citizens sharing and supporting the principles of American constitutional democracy</p>	<p><b>C-1B-M3</b> explaining the meaning and importance of basic principles of American constitutional democracy as reflected in core documents</p>	<p><b>C-1B-H2</b> explaining basic democratic beliefs and principles of constitutional democracy in American society and applying them to the analysis of issues of conflicting beliefs and principles</p>
	<p><b>C-1B-M4</b> analyzing the ways in which political and social conflict can be peacefully resolved</p>	<p><b>C-1B-H3</b> analyzing the nature of American political and social conflict</p>
	<p><b>C-1B-M5</b> analyzing democratic processes used to institute change</p>	<p><b>C-1B-H4</b> evaluating issues related to the differences between American ideals and the realities of American social and political life</p>
	<p><b>C-1B-M6</b> analyzing the importance of political parties, campaigns, and elections in the American political system</p>	<p><b>C-1B-H5</b> evaluating the roles of political parties, campaigns, and elections in American politics</p>
		<p><b>C-1B-H6</b> analyzing the historical and contemporary roles of associations and groups in local, state, and national politics</p>

## CIVICS: Citizenship and Government

### C. INTERNATIONAL RELATIONSHIPS

<b>K–4</b>	<b>5–8</b>	<b>9–12</b>
<b>C-1C-E1</b> explaining that the world is divided into different nations and describing the major ways that these nations interact	<b>C-1C-M1</b> describing how the world is organized politically and explaining the means by which nation-states interact	<b>C-1C-H1</b> analyzing how the world is organized politically and evaluating how the interaction of political entities, such as nation-states and international organizations, affects the United States
	<b>C-1C-M2</b> explaining the formation, implementation, and impact of United States foreign policy  <b>C-1C-M3</b> identifying types of foreign policy issues, using current and historical examples	<b>C-1C-H2</b> analyzing the major foreign policy positions of the United States and evaluating their consequences
		<b>C-1C-H3</b> evaluating the impact of American ideas and actions on the world and analyzing the effects of significant international developments on the United States

## CIVICS: Citizenship and Government

### D. ROLES OF THE CITIZEN

K-4	5-8	9-12
<b>C-1D-E1</b> explaining the meaning of citizenship and the means by which individuals become citizens of the United States	<b>C-1D-M1</b> explaining the meaning of citizenship and the requirements for citizenship and naturalization in the United States	
<b>C-1D-E2</b> describing the rights and responsibilities of citizenship in a democratic society	<b>C-1D-M2</b> identifying the rights and responsibilities of citizens and explaining their importance to the individual and to society  <b>C-1D-M3</b> discussing issues involving the rights and responsibilities of individuals in American society	<b>C-1D-H1</b> evaluating and defending positions on issues regarding the personal, political, and economic rights of citizens  <b>C-1D-H2</b> evaluating and defending positions regarding the personal and civic responsibilities of citizens in American constitutional democracy
<b>C-1D-E3</b> identifying and discussing civic traits that are important to the preservation and improvement of American constitutional democracy		
<b>C-1D-E4</b> describing the many ways that citizens can participate in and contribute to their communities and to American society	<b>C-1D-M4</b> describing the many ways by which citizens can organize, monitor, and help to shape politics and government at local, state, and national levels	<b>C-1D-H3</b> explaining and evaluating the various forms of political participation that citizens can use to monitor and shape the formation and implementation of public policy
<b>C-1D-E5</b> discussing issues related to citizenship and public service	<b>C-1D-M5</b> communicating the importance of knowledge to competent and responsible political participation and leadership	<b>C-1D-H4</b> analyzing and evaluating the importance of political leadership, public service, and a knowledgeable citizenry to American constitutional democracy

## ECONOMICS: Interdependence and Decision Making

### A. FUNDAMENTAL ECONOMIC CONCEPTS

K-4	5-8	9-12
<b>E-1A-E1</b> recognizing that limited resources require people to make decisions  <b>E-1A-E2</b> identifying what is gained and lost when individuals or groups make decisions  <b>E-1A-E3</b> demonstrating how economic wants affect decisions about using goods and services  <b>E-1A-E4</b> discussing and determining the process for making economic decisions	<b>E-1A-M1</b> describing how the scarcity of resources necessitates decision making at both personal and societal levels  <b>E-1A-M2</b> analyzing consequences of economic decisions in terms of additional benefits and additional costs  <b>E-1A-M3</b> analyzing the consequences and opportunity cost of economic decisions	<b>E-1A-H1</b> analyzing the impact of the scarcity of productive resources and examining the choices and opportunity cost that result
<b>E-1A-E5</b> explaining the relationships among producers and consumers  <b>E-1A-E6</b> describing how natural resources, human resources, and capital resources have been used and are combined in the production of goods and services  <b>E-1A-E7</b> describing how specialization affects productivity and contributes to the need for interdependence among producers and consumers	<b>E-1A-M4</b> analyzing the role of specialization in the economic process	<b>E-1A-H2</b> analyzing the roles that production, distribution, and consumption play in economic decisions
<b>E-1A-E8</b> determining how the development of skills and knowledge relates to career opportunity and economic well-being	<b>E-1A-M5</b> giving examples of how skills and knowledge increase productivity and career opportunities	<b>E-1A-H3</b> applying the skills and knowledge necessary in making decisions about career options

<b>E-1A-E9</b> identifying different methods for the distribution of goods and services, including the concept of markets	<b>E-1A-M6</b> describing the essential differences in the production and allocation of goods and services in traditional, command, and market systems	<b>E-1A-H4</b> comparing and evaluating economic systems  <b>E-1A-H5</b> explaining the basic features of market structures and exchanges
<b>E-1A-E10</b> identifying some of the economic institutions, such as households and banks, that make up the economy	<b>E-1A-M7</b> describing the various institutions, such as business firms and government agencies, that make up economic systems	<b>E-1A-H6</b> analyzing the roles of economic institutions, such as corporations and labor unions, that compose economic systems
<b>E-1A-E11</b> explaining and demonstrating why people participate in voluntary exchanges and how money helps in the process	<b>E-1A-M8</b> differentiating among various forms of exchange and money	<b>E-1A-H7</b> analyzing the roles of money and banking in an economic system
	<b>E-1A-M9</b> using economic concepts to help explain historic and contemporary events and developments	<b>E-1A-H8</b> applying economic concepts to understand and evaluate historical and contemporary issues

## ECONOMICS: Interdependence and Decision Making

### B. INDIVIDUALS, HOUSEHOLDS, BUSINESSES, AND GOVERNMENTS

K-4	5-8	9-12
<b>E-1B-E1</b> describing how prices are determined by the interactions of buyers and sellers	<b>E-1B-M1</b> explaining the role of supply and demand in a competitive market system	<b>E-1B-H1</b> identifying factors that cause changes in supply and demand
<b>E-1B-E2</b> explaining how the changes in prices affect incentives to produce, consume, and save	<b>E-1B-M2</b> explaining the factors that affect the production and distribution of goods and services	<b>E-1B-H2</b> analyzing how changes in supply and demand, price, incentives, and profit influence production and distribution in a competitive market system
<b>E-1B-E3</b> identifying and explaining economic concepts, such as profit, as an incentive for people to take economic risk		
<b>E-1B-E4</b> explaining why some goods and services are provided by the government through taxing, charging user fees, and borrowing	<b>E-1B-M3</b> explaining the difference between private and public goods and services	
	<b>E-1B-M4</b> identifying the costs and benefits of government policies on competitive markets  <b>E-1B-M5</b> identifying different types of taxes and user fees and predicting their consequences	<b>E-1B-H3</b> analyzing the impact of governmental taxation, spending, and regulation on different groups in a market economy
	<b>E-1B-M6</b> determining the reasons for trade between nations, identifying costs and benefits, and recognizing the worldwide interdependence that results	<b>E-1B-H4</b> analyzing the causes and consequences of worldwide economic interdependence  <b>E-1B-H5</b> evaluating the effects of domestic policies on international trade
<b>E-1B-E5</b> identifying the major goods and services produced in the local community and state	<b>E-1B-M7</b> describing historical and economic factors that have contributed to the development and growth of the national, state, and local economies	<b>E-1B-H6</b> analyzing Louisiana's role in the national and world economies

## ECONOMICS: Interdependence and Decision Making

## C. THE ECONOMY AS A WHOLE

K–4	5–8	9–12
	<b>E-1C-M1</b> explaining the meaning of economic indicators that help to describe economies	<b>E-1C-H1</b> explaining the meanings of such economic indicators as GDP, per capita GDP, real GDP, CPI, and unemployment rate  <b>E-1C-H2</b> explaining how interest rates, investments, and inflation/deflation, impact the economy
	<b>E-1C-M2</b> describing the influences of inflation, unemployment, and underemployment on different groups of people	<b>E-1C-H3</b> analyzing the causes and consequences of unemployment, underemployment, and income distribution in a market economy
		<b>E-1C-H4</b> explaining the basic concepts of United States fiscal policy, monetary policy, and regulations and describing their effects on the economy

## HISTORY: Time, Continuity, and Change

### A. HISTORICAL THINKING SKILLS

K–4	5–8	9–12
<b>H-1A-E1</b> demonstrating an understanding of the concepts of time and chronology	<b>H-1A-M1</b> describing chronological relationships and patterns	<b>H-1A-H1</b> applying key concepts, such as chronology and conflict, to explain and analyze patterns of historical change and continuity
<b>H-1A-E2</b> recognizing that people in different times and places view the world differently	<b>H-1A-M2</b> demonstrating historical perspective through the political, social, and economic context in which an event or idea occurred  <b>H-1A-M3</b> analyzing the impact that specific individuals, ideas, events, and decisions had on the course of history	<b>H-1A-H2</b> explaining and analyzing events, ideas, and issues within a historical context
<b>H-1A-E3</b> identifying and using primary and secondary historical sources to learn about the past	<b>H-1A-M4</b> analyzing historical data using primary and secondary sources	<b>H-1A-H3</b> interpreting and evaluating the historical evidence presented in primary and secondary sources
	<b>H-1A-M5</b> identifying issues and problems from the past and evaluating alternative courses of action	<b>H-1A-H4</b> utilizing knowledge of facts and concepts drawn from history and methods of historical inquiry to analyze historical and contemporary issues
	<b>H-1A-M6</b> conducting research in efforts to answer historical questions	<b>H-1A-H5</b> conducting research in efforts to analyze historical questions and issues  <b>H-1A-H6</b> analyzing cause-effect relationships

## **HISTORY: Time, Continuity, and Change**

### **BENCHMARKS K–4**

#### **B. FAMILIES AND COMMUNITIES**

<b>K–4</b>
<b>H-1B-E1</b> describing and comparing family life in the present and the past
<b>H-1B-E2</b> relating the history of the local community and comparing it to other communities of long ago

#### **C. LOUISIANA AND UNITED STATES HISTORY**

<b>K–4</b>
<b>H-1C-E1</b> describing the people, events, and ideas that were significant to the growth and development of our state and nation
<b>H-1C-E2</b> identifying the development of democratic principles and discussing how these principles have been exemplified by historic figures, events, and symbols
<b>H-1C-E3</b> describing the causes and nature of various movements of large groups of people into and within Louisiana and the United States throughout history
<b>H-1C-E4</b> recognizing how folklore and other cultural elements have contributed to our local, state, and national heritage

#### **D. WORLD HISTORY**

<b>K–4</b>
<b>H-1D-E1</b> identifying the characteristics and historical development of selected societies throughout the world
<b>H-1D-E2</b> describing the social and economic impact of major scientific and technological advancements
<b>H-1D-E3</b> discussing the impact of significant contributions made by historic figures from different regions of the world

## HISTORY: Time, Continuity, and Change

### BENCHMARKS 5–8 AND 9–12

#### B. UNITED STATES HISTORY

Eras	5–8	9–12
<b>ERA 1: Three Worlds Meet (Beginnings to 1620)</b>	<b>H-1B-M1</b> identifying and describing characteristics of societies in the Americas, Western Europe and Western Africa that increasingly interacted after 1450  <b>H-1B-M2</b> explaining the cultural, ecological, and economic results of early European exploration and colonization	<b>H-1B-H1</b> analyzing the significant changes that resulted from interactions among the peoples of Europe, Africa, and the Americas
<b>ERA 2: Colonization and Settlement (1565–1763)</b>	<b>H-1B-M3</b> describing the interactions among Native Americans, early Europeans, and Africans in the Americas  <b>H-1B-M4</b> tracing the emergence of religious freedom and changing political institutions in the English colonies  <b>H-1B-M5</b> analyzing the impact of European cultural, political, and economic ideas and institutions on life in the Americas	<b>H-1B-H2</b> summarizing the process by which the United States was colonized and later became an independent nation
<b>ERA 3: Revolution and the New Nation (1754–1820s)</b>	<b>H-1B-M6</b> explaining the causes and course of the American Revolution and the reasons for the American victory  <b>H-1B-M7</b> explaining the impact of the American Revolution on the politics, society, and economy of the new nation	<b>H-1B-H3</b> analyzing the development of the American constitutional system

	<p><b>H-1B-M8</b> relating the institutions and practices of government established during and after the American Revolution to the foundation of the American political system</p>	
<p><b>ERA 4:</b> <b>Expansion and Reform (1801–1861)</b></p>	<p><b>H-1B-M9</b> describing the territorial expansion of the United States and analyzing the effects on relations with Native Americans and external powers</p> <p><b>H-1B-M10</b> analyzing the changes and regional tensions created by Jacksonian democracy, the industrial revolution, increasing immigration, the rapid expansion of slavery, and the westward movement</p> <p><b>H-1B-M11</b> explaining and giving examples of the reform movements that occurred during the antebellum period and evaluating their impact on American society</p>	<p><b>H-1B-H4</b> tracing territorial expansion and reform movements in the United States</p>
<p><b>ERA 5:</b> <b>Civil War and Reconstruction (1850–1877)</b></p>	<p><b>H-1B-M12</b> describing the causes and course of the Civil War and examining the impact of the war on the American people</p> <p><b>H-1B-M13</b> comparing and evaluating various reconstruction plans of the post-Civil War era</p>	<p><b>H-1B-H5</b> analyzing the origins, major events, and effects of the Civil War and Reconstruction</p>
<p><b>ERA 6:</b> <b>The Development of the Industrial United States (1870–1900)</b></p>	<p><b>H-1B-M14</b> describing the impact of industrialization in the United States</p>	<p><b>H-1B-H6</b> analyzing the development of industrialization and examining its impact on American society</p>

		<b>H-1B-H7</b> describing the immigration and internal migration patterns that have occurred in the history of the United States and examining the cultural and social changes that have resulted
<b>ERA 7:</b> <b>The Emergence of Modern America (1890–1930)</b>	<b>H-1B-M15</b> describing the significant economic, political, social, and cultural changes that have occurred in the United States during the 20th century  <b>H-1B-M16</b> identifying the causes and consequences of major world conflicts involving the United States	<b>H-1B-H8</b> evaluating the significance of the Progressive Movement  <b>H-1B-H9</b> analyzing the rise of the labor and agrarian movements  <b>H-1B-H10</b> explaining the changing role of the United States in world affairs through World War I  <b>H-1B-H11</b> analyzing the significant changes that evolved in the United States between World War I and the Great Depression
<b>ERA 8:</b> <b>The Great Depression and World War II (1929–1945)</b>	<b>H-1B-M17</b> describing the impact of the Great Depression and World War II on American society	<b>H-1B-H12</b> analyzing the causes, developments, and effects of the Great Depression and the New Deal  <b>H-1B-H13</b> analyzing the origins, course, and results of World War II
<b>ERA 9:</b> <b>Contemporary United States (1945 to the present)</b>	<b>H-1B-M18</b> discussing significant developments and issues in contemporary United States history	<b>H-1B-H14</b> examining and summarizing key developments and issues in foreign and domestic policies during the Cold War era  <b>H-1B-H15</b> analyzing the economic, political, social, and cultural transformation of the United States since World War II

		<p><b>H-1B-H16</b> explaining the major changes that have resulted as the United States has moved from an industrial to an information society</p> <p><b>H-1B-H17</b> analyzing developments and issues in contemporary American society</p> <p><b>H-1B-H18</b> discussing and demonstrating an understanding of recent developments in foreign and domestic policies</p>
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## HISTORY: Time, Continuity, and Change

### BENCHMARKS 5–8 AND 9–12

#### C. WORLD HISTORY

Eras	5–8	9–12
<b>ERA 1: The Beginnings of Society</b>	<b>H-1C-M1</b> describing the earliest human communities  <b>H-1C-M2</b> explaining the emergence of agricultural societies around the world	<b>H-1C-H1</b> analyzing the development of early human communities and civilizations
<b>ERA 2: The Rise of Early Civilizations (4000–1000 B.C.)</b>	<b>H-1C-M3</b> identifying the major characteristics of early civilizations in Mesopotamia, Egypt, and the Indus valley  <b>H-1C-M4</b> tracing the development and expansion of agricultural societies and the emergence of new states  <b>H-1C-M5</b> analyzing the political, social, and cultural consequences of population movements and militarization in Europe and Asia	<b>H-1C-H2</b> making generalizations about the cultural legacies of both the ancient river and the classical civilizations
<b>ERA 3: Classical Traditions, Major Religions, and Giant Empires (1000 B.C.–A.D. 300)</b>	<b>H-1C-M6</b> discussing and giving examples of technological and cultural innovation and change  <b>H-1C-M7</b> describing the classical civilizations and examining their interactions and influences  <b>H-1C-M8</b> describing and comparing the emergence of major religions and large-scale empires in the Mediterranean basin, China, and India	<b>H-1C-H3</b> analyzing the origins, central ideas, and worldwide impact of major religious and philosophical traditions
<b>ERA 4: Expanding Zones of Exchange and Encounter (A.D. 300–1000)</b>	<b>H-1C-M9</b> tracing the expansion of major religions and cultural traditions and examining the impact on civilizations in Europe, Asia, and Africa	<b>H-1C-H4</b> summarizing the developments and contributions of civilizations that flourished in Europe, Asia, Africa, and the Americas

	<p><b>H-1C-M10</b> analyzing the political, social, and cultural developments and changes that resulted from the rise and fall of empires and kingdoms in Europe, Asia, Africa, and the Americas</p>	
<p><b>ERA 5:</b> <b>Intensified Hemispheric Interactions</b> <b>(A.D. 1000–1500)</b></p>	<p><b>H-1C-M11</b> analyzing the cultural and economic impact of the interregional system of communication and trade that developed among the peoples of Europe, Asia, and Africa</p> <p><b>H-1C-M12</b> explaining the developments and events that led to the political, social, cultural, and economic transformation of Europe</p> <p><b>H-1C-M13</b> describing the development and expansion of complex societies and empires in the Americas</p>	<p><b>H-1C-H5</b> analyzing the consequences of the economic and cultural interchange that increasingly developed among the peoples of Europe, Asia, and Africa</p>
<p><b>ERA 6:</b> <b>Emergence of the First Global Age (1450–1770)</b></p>	<p><b>H-1C-M14</b> explaining the political, cultural, and economic developments and trends of major world regions that resulted in the transformation of societies in the fifteenth through the mid-eighteenth centuries</p>	<p><b>H-1C-H6</b> analyzing the impact of transoceanic linking of all major regions of the world</p> <p><b>H-1C-H7</b> analyzing the political, cultural, and economic developments and trends that resulted in the transformation of major world regions</p> <p><b>H-1C-H8</b> explaining how the emergence of territorial empires in Europe, Asia, and Africa unified large areas politically, economically, and culturally</p>

		<b>H-1C-H9</b> tracing the expansion of European power and economic influence in the world and examining the impact of this expansion on societies in Asia and the Americas
<b>ERA 7: An Age of Revolutions (1750–1914)</b>	<b>H-1C-M15</b> determining and discussing the impact of the political, agricultural, and industrial revolutions on societies around the world  <b>H-1C-M16</b> describing the transformation of world societies that occurred during an era of global trade and Western domination	<b>H-1C-H10</b> analyzing the impact that political revolutions and new ideologies had on societies around the world  <b>H-1C-H11</b> evaluating the economic, political, and social consequences of the agricultural and industrial revolutions on world societies  <b>H-1C-H12</b> analyzing the patterns of worldwide change that emerged during the era of Western military and economic domination
<b>ERA 8: A Half-Century of Crisis and Achievement (1900–1945)</b>	<b>H-1C-M17</b> identifying the causes and worldwide consequences of major 20th century conflicts	<b>H-1C-H13</b> analyzing the causes and international consequences of World War I, the rise and actions of totalitarian systems, World War II, and other early 20th century conflicts
<b>ERA 9: The 20th Century Since 1945 (1945 to the present)</b>	<b>H-1C-M18</b> identifying and discussing significant political, economic, social, cultural, and technological trends that have had an impact on the modern world	<b>H-1C-H14</b> analyzing the international power shifts and the breakup of colonial empires that occurred in the years following WWII  <b>H-1C-H15</b> explaining the worldwide significance of major political, economic, social, cultural, and technological developments and trends

## **HISTORY: Time, Continuity, and Change**

### **BENCHMARKS 5–8**

#### **D. LOUISIANA HISTORY**

<b>5–8</b>
<b>H-1D-M1</b> describing the contributions of people, events, movements, and ideas that have been significant in the history of Louisiana
<b>H-1D-M2</b> tracing the development of the various governments that have been established in Louisiana throughout history
<b>H-1D-M3</b> identifying and discussing the major conflicts in Louisiana's past
<b>H-1D-M4</b> locating and describing Louisiana's geographic features and examining their impact on people past and present
<b>H-1D-M5</b> tracing the development and growth of Louisiana's economy throughout its history
<b>H-1D-M6</b> examining folklore and describing how cultural elements have shaped our state and local heritage

## **Louisiana Educational Assessment Program** **Social Studies Achievement Level Descriptors: Grade 8**

**Note:** These descriptors have been modified slightly from the 2000 publication to match the condensed descriptors on the updated 2006 Student Reports.

<b>Achievement Level</b>	<b>Descriptors</b>
<b>Advanced</b>	<p>Students scoring at this level generally exhibit the ability to do the following:</p> <ul style="list-style-type: none"> <li>• <b>Geography:</b> apply extensive geographic knowledge, analytical concepts, and vocabulary; analyze a variety of maps with a variety of scales and show the relationship between them; use case studies for spatial analysis to develop maps and other graphics; differentiate between patterns of climate, vegetation, and population across Earth's surface and explain how regions change over time; and profile regions by using geographical concepts, tools, and skills.</li> <li>• <b>Civics:</b> evaluate the importance of rules and laws, political parties, campaigns, and elections in the American political system; weigh the impact of American ideas and actions on the world; and compare and contrast positions relating to the rights of citizens.</li> <li>• <b>Economics:</b> apply fundamental economic concepts; analyze the role of governmental policies in competitive markets; and examine the reasons for worldwide interdependence based on historical and economic factors.</li> <li>• <b>History:</b> evaluate historical patterns as they relate to specific events; make generalizations about historical topics using a variety of sources; and develop an awareness of the political, social, and economic themes in history.</li> </ul>
<b>Mastery</b>	<p>Students scoring at this level generally exhibit the ability to do the following:</p> <ul style="list-style-type: none"> <li>• <b>Geography:</b> analyze a wide variety of physical and cultural features; apply a fundamental geographic vocabulary; compare information presented in different scales; use geographic tools to translate information into patterns; evaluate how human activity affects the environment; interpret various patterns of trade and migration; and solve location questions by integrating two or more sources.</li> <li>• <b>Civics:</b> compare and contrast the relationship between state and federal constitutions; analyze the ways in which political and social conflict can be peacefully resolved; interpret the impact of U.S. foreign policy on the world; and analyze ways in which citizens help to shape politics and government at various levels.</li> <li>• <b>Economics:</b> apply fundamental economic concepts; apply the meaning of economic indicators and their role in economics; analyze various economic systems and their historical impact; and evaluate the opportunity cost of economic decisions.</li> <li>• <b>History:</b> recognize historical connections between people and events; distinguish between primary and secondary sources; incorporate geographic, technological, and other reference material; and communicate ideas about historical themes with supporting evidence.</li> </ul>

<b>Basic</b>	<p>Students scoring at this level generally exhibit the ability to do the following:</p> <ul style="list-style-type: none"> <li>• <b>Geography:</b> utilize vocabulary of geographic concepts relating to patterns, relationships, distance, direction, and location; use latitude and longitude to locate places; identify continents, oceans, or selected countries and cities; explain the differences between maps/globes, read map scales and use an atlas/almanac; illustrate relationships that exist between the physical environment and human activity; identify the distinguishing characteristics of a region; and describe the movement of people, goods, services, and ideas.</li> <li>• <b>Civics:</b> explain the major purposes of government; identify and explain the importance of basic principles of American constitutional democracy; describe major foreign policy of the U.S.; and describe the requirements of citizenship and naturalization in the U.S.</li> <li>• <b>Economics:</b> compare basic concepts related to economics; explain the causes and consequences of economic decision making; distinguish how specialization, skills, and knowledge affect the economic process; compare various economic systems and their historical impacts; and explain the role of supply and demand on production and distribution of goods and services.</li> <li>• <b>History:</b> identify and categorize people, places, events, and documents in historical context; understand the impact of diverse cultures on American life; explain the significance of major historical events; and explain the fundamental political ideas and institutions of American life.</li> </ul>
<b>Approaching Basic</b>	<p>Students scoring at this level generally exhibit the ability to do the following:</p> <ul style="list-style-type: none"> <li>• <b>Geography:</b> obtain information from geographic models; draw a variety of maps; memorize various geographic data; and recognize that human activity is affected by the environment.</li> <li>• <b>Civics:</b> recognize types of government; identify the basic principles of American constitutional democracy; recognize a foreign policy issue; and list the rights and responsibilities of American citizens.</li> <li>• <b>Economics:</b> identify basic concepts and vocabulary terms related to economics; and discuss how supply and demand affects the price of goods and services.</li> <li>• <b>History:</b> identify historical people and places; develop an awareness of diverse cultures in America; name a variety of historical events; and recognize the fundamental political ideas and institutions of American life.</li> </ul>
<b>Unsatisfactory</b>	<p>Students scoring at this level have not demonstrated the fundamental knowledge and skills needed for the next level of schooling. Students at this level generally have not exhibited the ability to</p> <ul style="list-style-type: none"> <li>• <b>Geography:</b> obtain information from geographic models; draw a variety of maps; memorize various geographic data; and recognize that human activity is affected by the environment.</li> <li>• <b>Civics:</b> recognize types of government; identify the basic principles of American constitutional democracy; recognize a foreign policy issue; and list the rights and responsibilities of American citizens.</li> <li>• <b>Economics:</b> identify basic concepts and vocabulary terms related to economics and discuss how supply and demand affects the price of goods and services.</li> <li>• <b>History:</b> identify historical people and places; develop an awareness of diverse cultures in America; name a variety of historical events; or recognize the fundamental political ideas and institutions of American life.</li> </ul>





## **APPENDICES**



## APPENDIX A

### Glossary

**Accommodations** changes to test format or administration conditions for students with special needs that do not change the construct being measured but do remove construct-irrelevant contributions to test scores that would otherwise exist for these individuals. Louisiana permits accommodations for students with disabilities according to the Individuals with Disability Education Improvement Act of 2004 (IDEA) or the Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, as well as students identified as limited English proficient.

**Accountability** the systematic use of assessment data and other information to assure those inside and outside of the educational system that the performance of students, educators, and schools is progressing

**Achievement levels** expectations for levels of performance. LEAP and iLEAP achievement levels are *Advanced, Mastery, Basic, Approaching Basic, and Unsatisfactory*.

**Assessment** a systematic method of obtaining evidence from tests and other sources, used to draw inferences about characteristics of people or programs for a specific purpose

**Benchmark** a broad statement of process and/or content that is used as a reference to develop curriculum and to assess student progress

**Common Core State Standards (CCSS)** standards adopted by BESE in July 2010, which define the knowledge and skills students should acquire throughout their K-12 education in order to graduate from high school prepared to succeed in their post-secondary pursuits

**Constructed-response item** a test item with directions that instruct students to generate an answer that is stated in writing or explained by a diagram, a chart, or some other evidence of their thinking

**Content standards** a description of what a student should know and be able to do through subject matter, knowledge, and proficiencies gained as a result of his or her education

**Criterion-referenced test (CRT)** an assessment that compares a student's performance to a specific learning objective rather than to the performance of other students

**Cut score** the critical point for separating scores into achievement level groups based on an established set of criteria

**Dimensions of writing** the components of the scoring rubric used to evaluate student responses to a writing prompt. For LEAP, the dimensions of content, style, sentence formation, usage, mechanics, and spelling are scored.

**Grade-Level Expectation (GLE)** a statement that defines what a student should know and be able to do at the end of a given grade level. GLEs add further definition to standards and benchmarks.

**Individual Accommodation Plan (IAP)** a written plan developed at the school level that describes the accommodations for classroom instruction and testing, as well as statewide assessments, for a student who qualifies under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, also referred to as a Section 504 plan

**Individualized Education Program (IEP)** a written plan developed by the IEP team that prescribes the educational program designed to meet the specific needs of a student who meets federal special education guidelines under the Individuals with Disability Education Improvement Act of 2004 (IDEA). This plan includes the accommodations students are to receive in classroom instruction and testing, as well as on statewide assessments.

**Inter-rater reliability** the degree to which different scorers agree on the score to be assigned to a test response

**Item** an individual question or task in an assessment or evaluation instrument

**Key Concepts** descriptions of important content emphasized in the assessment

**LEAP** Louisiana Educational Assessment Program (LEAP), Louisiana's statewide assessments for grades 4 and 8

**LEP** abbreviation for limited English proficiency. The No Child Left Behind Act (NCLB) identifies these students as those who do not speak English as their primary language, have a limited ability to read, speak, write, or understand English and whose difficulties with the English language may be sufficient to deny the individual the ability to meet a state's proficient level of achievement on state assessments.

**Multiple-choice item** a test item that consists of an interrogatory stem with answer choices. Students are required to select the correct answer from several choices. This kind of item is also referred to as a selected-response item.

**NCLB** the federal Elementary and Secondary Education Act of 2001, known as No Child Left Behind

**Partnership for Assessment of Readiness for College and Careers (PARCC)** a consortium of 24 states, including Louisiana, who are developing a common set of assessments in English Language Arts and mathematics that are centered on measuring student progress on the CCSS, which are based on the knowledge and skills necessary for high school graduates to be prepared for college and careers. Louisiana will fully implement the PARCC assessments during the 2014-2015 school year.

**Raw score** a person's observed score on a test, that is, the number correct

**Rubric** a scoring guide for open-ended questions or performance tasks. A scoring rubric contains a description of the requirements for varying levels of success in response to the task.

**Sample test items** examples of the kinds of test items that appear on a test such as LEAP

**Scaled score** derived scores to which raw scores are converted by numerical transformation (e.g., conversion of raw scores to percentile ranks or scaled scores)

**Standard** a broad statement of expectations for student learning

**Standard setting** the process for determining the cut point for each achievement level

**Stimulus material** the part of a test item that provides information needed to complete the item (e.g., illustrations, maps, charts, and graphs)

**Strand** categories within particular content areas. Because strands are interrelated, they should be integrated, rather than taught in isolation. For this reason, a test item may assess more than one strand.

**Test blueprint** a document, usually in the form of a chart, representing the distribution of items for each standard or strand for a content area assessment

**Test specifications** detailed information about an assessment (e.g., test blueprint, test design, item types, test description, test content)

**Writing prompt** the topic and explanation provided to students on the English Language Arts writing test that elicits a response to text (one or two passages)

## APPENDIX B

### LEAP Transitional Assessments Frequently Asked Questions (FAQs)

#### **1. Why is LEAP being revised?**

In 2010, the Board of Elementary and Secondary Education (BESE) approved the Common Core State Standards (CCSS) ([http://www.doe.state.la.us/topics/common\\_core.html](http://www.doe.state.la.us/topics/common_core.html)), which will eventually replace the current English language arts (ELA) and mathematics standards/GLEs. After adopting the CCSS, Louisiana became a governing member of a 24-state consortium—the Partnership for Assessment of Readiness for College and Careers (PARCC)—working to develop next-generation assessments that measure the full range of the CCSS. In preparation for the PARCC assessments, which are to be administered starting in the 2014-2015 school year, the Department has created transitional assessments in ELA and mathematics.

#### **2. How does the transitional LEAP differ from previous LEAP assessments?**

The mathematics transitional assessments will now only include grade-specific items that measure content common to the GLEs and the CCSS (<http://www.louisianaschools.net/topics/gle.html>).

In the LEAP ELA assessments the current writing prompts will be replaced with a new type of prompt that focuses on a key instructional shift—writing grounded in textual evidence. Instead of responding to a “stand alone” writing prompt, a student will read one or two passages and use the information from the text(s) to support his or her response.

The science and social studies LEAP assessments remain unchanged.

#### **3. Will Writer’s Checklists be provided for the ELA transitional tests?**

Yes. There will be three new Writer’s Checklists in the future: one for grade 3; one for grades 5, 6, and 7; and one for grades 4 and 8. The Writer’s Checklists have all been modified to reflect the new rubrics that will be used to score the transitional writing prompts.

#### **4. Will students be allowed to use calculators on the transitional Mathematics test?**

Phase 1 includes a constructed-response session that **allows** the use of calculators. Phase 2 includes two multiple-choice sessions. One **allows** the use of calculators; the other **does not**.

#### **5. Will Mathematics Reference Sheets be provided?**

Yes. Mathematics Reference Sheets have been designed specifically for each grade.

#### **6. Will the kind of scores provided for LEAP change?**

Yes. Mathematics scores will have new reporting categories (See Tables 2.3 and 2.4 on page 2-4 of the *LEAP Assessment Guide* for additional information on mathematics reporting categories).

The score reports for ELA will not change.

**7. Are the LEAP assessments high-stakes for students regarding pupil progression?**

Yes. The LEAP tests are designed to ensure that students have adequate knowledge and skills before they move on to the next grade. For grade 4 and grade 8 students to be promoted to the next grade, they must score *Basic* or above in either English language arts or mathematics and *Approaching Basic* or above in the other subject.

## APPENDIX C

### Testing Special Populations Special Education Students and Students with One or More Disabilities According to Section 504

All special education students are to be tested on LEAP, except those whose IEPs indicate otherwise. All students with one or more disabilities according to Section 504 are to be tested.

A summary of test accommodations that may be used for special education students and for students with disabilities according to Section 504 is given below. All accommodations also must be documented on the IEP or IAP and Verification of Section 504 form for the student to receive them. Full details of allowable accommodations and administration procedures are available in the *LEAP Test Administration Manual* and in *Bulletin 118*.

- **Braille:** Braille test booklets that include all the items in the regular-print edition of the LEAP are available. The test administrator must transfer all braille answers to a scorable answer document.
- **Large Print:** The large-print edition is essentially an enlarged version of the regular-print edition of the test. All test items in the regular-print edition of the answer document are included in the large-print test booklet. Students who use the large-print edition mark their answers on the large-print test booklet, which must be transferred by the test administrator to a scorable answer document.
- **Answers Recorded:** If a student is unable to write due to his or her disability, the test administrator must record the student's exact answers on the scorable answer document.
- **Assistive Technology:** Assistive technology, for example, a computer, tape recorder, calculator, abacus, grip for a pencil, visual magnification device, communication device, mask or marker to maintain place, speech synthesizer, or electronic reader, may be provided.
- **Extended Time:** Every student must be given sufficient time to respond to every test item. Time may be adjusted for certain students, such as those who have short attention spans or who may be unable to concentrate for long periods of time on a given task.
- **Communication Assistance:** If warranted by the student's reading level as documented on the IEP or Section 504 Individual Accommodation Plan (IAP) and Verification of Section 504 form, communication assistance in signing or cuing modality should be provided for **portions** of the test—with the exception of the English Language Arts Reading and Responding session.
- **Transferred Answers:** If accommodations provide for a student to record answers in the test booklet or use braille, large-print, or technological assistive devices, the student's responses must be transferred onto a scorable answer document exactly as the student wrote them.
- **Individual/Small Group Administration:** Tests may be administered to a small group (maximum, eight students) or to an individual requiring more attention than can be provided in a larger classroom. If accommodations affect the standard administration of the test (e.g., *Tests Read Aloud*), individual or small group administration **must** be used.

- **Tests Read Aloud:** Students may have **portions** of the tests read to them, **with the exception of the English Language Arts Reading and Responding session**. Although the passages, questions, or multiple choices on this part of the test cannot be read aloud, the **directions** may be read aloud.
- **Other:** Any necessary accommodations may be used, but they must be determined by the IEP team or Section 504 Committee and documented on the student's IEP or IAP and Verification of Section 504 form and must not breach test security or invalidate the meaning of the test score or the purpose of the test. Examples of other accommodations include highlighting the task or verbs in the test directions or assisting the student in tracking the test items.

## Information for Deaf and Hard of Hearing Students

The intent of the accommodations for students who are deaf or hard of hearing is to present the instructions in a manner that will allow them to demonstrate skills that have been acquired. The signing modality routinely used in the students' regular classrooms should be considered when administering these tests.

### Physical Setting

The physical setting should include verification that students' auditory listening devices are in good repair and are in use during the testing period. Students who depend primarily on lip reading should be seated no more than ten feet from the test administrator.

### Use of Signs and Fingerspelling

- Students may have **portions** of the tests signed to them, **with the exception of the English Language Arts Reading and Responding session**. Although the passages, questions, or multiple choices on this session of the test cannot be signed, the **directions** may be signed. Signed administration of tests that measure reading ability makes little sense, since any score so obtained would offer no information about a student's ability and thus be invalid.
- Test items should be signed exactly as written but **not** when the sign would reveal the answer to the question.
- Fingerspelling must **not** be used to administer items that require students to demonstrate the skill of spelling.

## Information For Limited English Proficient Students

All LEP students are to be tested. LEP students qualify for accommodations **used in their classroom instruction and assessment.**

- **Extended Time:** Every student should be given sufficient time to respond to every test item. Time may be adjusted for students who must process from one language to another.
- **Individual/Small Group Administration:** Tests may be administered to a small group (maximum, eight students) or to an individual requiring more attention than can be provided in a larger classroom. If other selected accommodations affect the standard administration of the test (e.g., *Tests Read Aloud*), individual or small group administration **must** be used.
- **Provision of English/Native Language Word-to-Word Dictionary (No Definitions):** LEP students may use either a standard or electronic English/native language word-to-word dictionary (no definitions) on all sessions of the tests. Students may use an English/native language word-to-word dictionary **with definitions** on **only** the English Language Arts **Writing** test.
- **Tests Read Aloud:** Students may have **portions** of the tests read to them, **with the exception of the English Language Arts Reading and Responding session.** Although the passages, questions, or multiple choices on this session of the test cannot be read aloud, the **directions** may be read aloud.
- **Test Administered by ESL Teacher or by Individual Providing Language Services:** Familiarity with the speech patterns of the ESL teacher or the individual providing language services may help the student better understand the test directions or the portions of the test that are read aloud if the student receives the accommodation *Tests Read Aloud.*

## Implementing Testing Accommodations— A Planning Checklist for the General Education Teacher

1. Do you know which accommodations are documented on the students' IEPs or IAPs?
2. Does the student use the accommodations in classroom instruction and assessment?
3. Have special test materials been ordered (large print, braille, transparencies)?
4. Have students eligible for the accommodation *Tests Read Aloud* been assigned individual or small-group administration to prevent interfering with the testing of other students?
5. Are any other students eligible for small-group or individual test administration?
6. Where will small-group or individual testing take place, and who is the person trained to supervise the student(s) there?
7. If needed, have trained readers, scribes, and sign-language interpreters been assigned to individual students?
8. Is necessary special equipment available, and has it been checked for correct operation (e.g., word processor, computer, tape recorder, calculator)?
9. During testing, are you providing all eligible students with the accommodations documented on their IEPs or IAPs and used in classroom instruction and assessment? After testing, did you transfer student responses to scorable answer documents for students using braille, large print, and assistive devices?
10. Did you record the specific accommodations **actually used in testing** on the answer document?
11. Have students who took makeup tests received the needed accommodations?

(Verify numbers 1, 3, 4, 5, 6, 7, 8, and 11 with the School Test Coordinator.)

### Comments and Cautions

Whenever possible, attend IEP meetings for students you teach. Information from the general education teacher is necessary to help the IEP team determine which instructional and classroom assessment accommodations enable a student to demonstrate best what he or she knows and can do.

Individual or small-group administration **must** be used if the accommodations will interfere with the testing of other students (e.g., *Tests Read Aloud*).

Immediately following testing, all provided accommodations must be marked on scorable answer documents.

### Ethical Assessment Practices

Ethical assessment practices relate to actions between test administrators and students taking the test. Unethical practices include coaching students during testing, editing student work, giving clues, paraphrasing, offering additional information, or any other practice that would give students unapproved assistance or provide advantage.

Accommodations must never compromise the purpose of the test. For example, a test of reading comprehension cannot be read aloud because that destroys the purpose of the test—to measure reading ability. However, part or all of the Science and other content-area tests may be read aloud to students who are to receive the accommodation *Tests Read Aloud*.

Finally, accommodations must not compromise test security or confidentiality. All policies and procedures regarding test security and processing of test materials must be followed. (See your district and the BESE Test Security Policy as well as *Bulletin 118*.)



## APPENDIX D

### Writer's Checklist



GRADES 4 & 8

#### ENGLISH LANGUAGE ARTS WRITER'S CHECKLIST

As you write your composition, remember these important points.

##### Content:

- Read the directions, the passage(s), and the writing topic carefully and write on all parts as directed.
- Present a clear main idea.
- Give enough details to support and develop your main idea.
- Make sure to use well-chosen details from the passage(s) to support your ideas.
- Present your ideas in a logical order and include a clear beginning, middle, and ending.

##### Style:

- Use words that express your meaning well.
- Use a variety of sentence types and lengths to make your writing easy to follow.

##### Sentence Formation:

- Write in complete sentences and use a variety of sentence patterns.

##### Usage:

- Write using appropriate subject-verb agreement, verb tenses, word meanings, and word endings.

##### Mechanics:

- Write using correct punctuation.
- Write using correct capitalization.
- Write using appropriate formatting (e.g., indentations, margins).

##### Spelling:

- Write using correct spelling.



Remember to print or write neatly.

#### DIRECTIONS FOR WRITING

Follow the steps below to help you write a successful composition.

##### Step 1: Planning and Drafting

- Read the directions, the passage(s), and the writing topic in your test booklet carefully.
- Think about what you will write before you begin.
- Make sure to use well-chosen details from the passage(s) to support your ideas.
- Use the space provided in your rough draft booklet for planning your composition and writing your rough draft.
- Remember that your planning notes and rough draft will not be scored.

##### Step 2: Revising

- Review your composition to make sure you have covered all the points on the Writer's Checklist.
- Reread your rough draft.
- Rearrange ideas or change words to make your meaning clear and improve your composition.
- Write your final draft neatly on the correct page(s) in your test booklet.
- Write your final draft in either print or cursive using a No. 2 pencil.

##### Step 3: Proofreading

- Read your final draft.
- Make any needed corrections.
- Erase or strike through words if necessary.



##### Points to Remember:

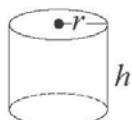
- Only the writing on the **Final Draft** pages in your test booklet will be scored.
- Your composition will be scored on (1) development and support of ideas including how you use the information in the passage(s), (2) expression of ideas, (3) correct sentence formation, (4) usage, (5) mechanics, and (6) spelling.

## Mathematics Reference Sheet

# LEAP MATHEMATICS REFERENCE SHEET—GRADE 8

Use the information below to answer questions on the Mathematics test.

### Cylinder

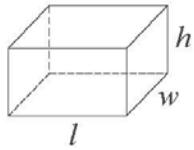


$$\text{Volume} = \pi \cdot r^2 \cdot h$$

Surface

$$\text{Area} = 2\pi \cdot r^2 + 2\pi \cdot r \cdot h$$

### Rectangular Solid

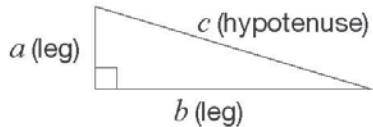


$$\text{Volume} = l \cdot w \cdot h$$

Surface

$$\text{Area} = 2wl + 2lh + 2wh$$

### Pythagorean Theorem: $a^2 + b^2 = c^2$



**Distance Formula:**  
 $\text{distance} = \text{rate} \cdot \text{time}$